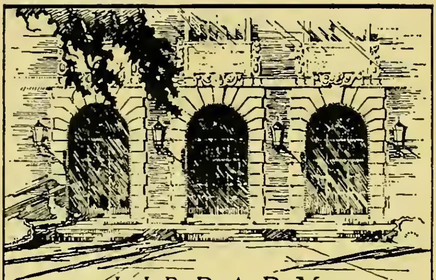

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Contents

Price Changes, Money Value, and Profit Distribution Within the Framework of Financial Accounting

ERICH E. KOSIOL*

INTRODUCTION

The important problems indicated in the title of this article are currently being intensively and internationally discussed in theory as well as in practice. Because financial accounting with the specific goal of income determination should be designed as a managerial measure, the solution of these intricate questions is most urgent. This article will discuss some German concepts of income determination that originated after World War I from the influence of inflationary pressures on accounting. The intention is to encourage the international discussion of the various methods and procedures that have been proposed.

The following presentation can be only a brief and somewhat incomplete sketch. It is not possible to delve into details and fully explain the several proposed techniques. The author believes it is feasible, however, to present his ideas by the use of quite simplified illustrations to demonstrate the essentials.

MEASUREMENT OF VALUE

Before explaining the nature of price changes, the problem of measurement in general should be examined briefly. Measurement in monetary terms, mostly in special currency units, e.g., American dollars, English pounds, or German marks, belongs to the type of metrical or

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This paper is based on recent lectures given at the University of California, Berkeley, and the University of Illinois, where he served as a Visiting Professor for the Center for International Education and Research in Accounting.

ratio scaling, mathematically expressed by the functional relation $x' = cx$ of similarity transformations, i.e., the hierarchy of scaling classes is order-ranked so that all class intervals are of equal size and so that there is an absolute zero point which is valid for all pertinent scales. Moreover, each value of one scale x can be transformed into the corresponding value of any other scale x' by multiplying x with a constant factor c, the proportionality factor. All possible currency scales are thus interconnected with each other by these constant ratios or coefficients. They represent the exchange rates for any two currencies.

A necessary precondition for any metrical measurement is the establishment of an invariable scale unit, i.e., the determination of the size of class intervals, combined with the invariable starting point of zero. All figures of the scale are multiples of the constant measuring unit. Without this basic requirement for a stable currency unit, monetary measurement is not possible at all. Value figures expressed in terms of changing scales are completely useless. They cannot be added to or subtracted from with any rational meaning. The variation of a currency unit may be done only by conversion into a different scale, but not within the same scale.

One should note that it is impossible to compare meaningfully value figures measured in terms of different or varying currency units. This is true both within the financial statements of one individual year and for the consecutive statements of several years.

The accumulation and comparison of value figures (for assets and equities as well as expenses and revenues) create, however, the foundation of financial accounting and require a stable measuring unit. This essential point forms the content of Postulate C-4 of Moonitz:[1] "Accounting reports should be based on a stable measuring unit." Littleton and Zimmerman[2] devote an entire chapter to the question "Inflation and Accounting Realism" and state that "The basic concept of price level adjustment offers perhaps the strongest challenge to accounting ideology that has yet appeared." Basic Accounting Postulate 4 presented by a Study Group at the University of Illinois states that price level adjustments may be desirable or essential respectively. Accounting principle 5 of this study deals in detail with such modifications of account data.[3]

[1] Maurice Moonitz, "The Basic Postulates of Accounting," *Accounting Research Study Number 1,* AICPA, 1961, p. 53.

[2] A. C. Littleton and V. K. Zimmerman, *Accounting Theory: Continuity and Change,* Englewood Cliffs, New Jersey: Prentice-Hall, 1962, p. 175.

[3] *A Statement of Basic Accounting Postulates and Principles,* Urbana, Illinois: Center for International Education and Research in Accounting, 1964, pp. 9-10 and 29-30.

TYPES OF PRICE CHANGES

In considering price changes, it is most important to distinguish between two different types of changes which reflect completely different aspects based on discernible influences: price level changes and relative price changes.

Price level changes purport to reflect changes in the value of money, e.g., from inflation. All prices are generally raised to a higher (or lower) level. This indicates that the scale unit of currency has changed. Not the prices as such have changed, but rather the measuring basis to which they are related.

The income determined in this way with data from different price levels is a composite consisting of elements with materially different meanings. The sense of financial accounting is fully destroyed. It is necessary, therefore, either to resign and do without accounting or to find an appropriate scale to replace the uninformative one.

Even with a stable currency there are, nevertheless, individual price changes. They result from the state of markets and depend on demand and supply and the many other influences which concern each individual commodity. Only these price changes can be regarded as true price changes. One may properly identify them as relative price changes because they are relative to the price level, and oscillate about this level. That is why we must distinguish within the dispersion of prices between two groups of relative prices: those moving above and those moving below the average trend. Only in this way is the price level kept constant in an average trend. Otherwise, it must vary.

The designation "relative" further indicates that the changing prices of a certain commodity can be compared over time and with the different prices of all commodities at the same time. The individual prices reflect the relative economic values of commodities, goods, and services measured by the invariable currency unit.

Even if an unstable currency is stabilized, relative price changes will still remain. They are always in existence and are additionally superimposed by price level changes. The distinction between historical (or acquisition) and current (or replacement) prices, therefore, is also true. On the one hand, prices may be stabilized at the time point of occurrence, i.e., of procurement or sale of goods and services. Then we obtain historical or actual prices of the resources considered. When, on the other hand, any prices on a certain different day are stabilized, one computes current prices related to this day.

The highly important distinction between price level changes and

relative price changes has been stressed in Principle B of Sprouse and Moonitz[4] and in the report of the research staff of the American Institute of Certified Public Accountants (AICPA).[5] Bedford[6] in the same sense distinguishes between general and separate price changes and compares them with the movements of the tide and of the single waves respectively. Correspondingly, he speaks of general indices for changes in the purchasing power of money and of specific indices for price level changes of each type of resource. The author, with many others, however, restricts the term price level or price niveau only to the average amount of the total of all prices in a system of resources. Then, one can compute specific indices for relative price changes but these do not measure price level changes. But that is solely a problem of terminology.

Examples

Let us assume there are only four commodities A, B, C, and D with their pertinent quantities q and prices p, p_1, p_2, and $\bar{p}_2$ in the market (Exhibit 1).

Line 4: The price level is represented by the addition of all products pq with \$770 used as a reference base of 100 percent.

Line 6: The prices p_1 of A and C are rising, of A more than of C. The prices of B and D are falling, of B more than of D.

Line 7: The price level p_1q is again \$770. Therefore, the price changes are true relative price changes measured by a constant price unit.

Line 10: The price level p_2q has changed to \$1066. This increase of level indicates that the money value of the dollar has decreased. The average increase of prices amounts to 38.4 percent, and, correspondingly, indicates the average decrease of purchasing power. The price changes (in line 9) are influenced by scale changing. All prices have risen and thus generated the higher level. The question is: How can the relative price changes be shown independent of price level? (See lines 11 and 12.)

[4] Robert T. Sprouse and Maurice Moonitz, "A Tentative Set of Broad Accounting Principles for Business Enterprises," *Accounting Research Study Number 3,* AICPA, 1962, pp. 16-18 and 55.

[5] American Institute of Certified Public Accountants (Staff of the Accounting Research Division) (AICPA), "Reporting the Financial Effects of Price-Level Changes," *Accounting Research Study Number 6,* 1963, especially p. 8.

[6] Norton M. Bedford, *Income Determination Theory: An Accounting Framework,* Reading, Massachusetts: Addison-Wesley Publishing Co., Inc., 1965, pp. 59 and 143.

Exhibit 1

									Index Number	Per Cent
1. Commodity	A		B		C		D			
2. Quantity q (units)	30		40		20		50			
3. Price p (\$)	3		4		6		8			
4. Price level pq (\$)	90	+	160	+	120	+	400	=	770	100
5. Price p_1 (\$)	4		3		7		7.80			
6. Price change	+33⅓% rising		−25% falling		+16⅔% rising		−2.5% falling			
7. Price level p_1q (\$)	120	+	120	+	140	+	390	=	770	100
8. Price p_2 (\$)	6		4.40		7.50		11.20			
9. Price change total	+100% rising		+10% rising		+25% rising		+40% rising			
10. Price level p_2q (\$)	180	+	176	+	150	+	560	=	1066	138.4
11. Price stabilized $\bar{p}_2$ (\$)	4.30		3.10		5.40		8.20			
12. Price change relative	+43.3% rising		−22.5% falling		−10% falling		+25% rising			
13. Price level stabilized $\bar{p}_2q$ (\$)	128	+	124	+	107	+	410	=	770	100

Line 11: We can compute the stabilized prices $\bar{p}_2$ by dividing the prices p_2 (line 8) by the price level denominator 1.384 (line 10).

Line 12: The relative prices of both A and D are increasing because the total price changes (in line 9) are higher (100 and 40 percent) than the average (38.4 percent). Conversely, the relative prices are falling and the total price changes are below average for B and C.

Line 13: The stabilized price level $\bar{p}_2 q$ must be \$770 or 100 percent again.

STABILIZATION OF PRICES

The task lies in the construction of a new metrical scale with an invariable interval unit. In the author's opinion, it is not reasonable to use the given scale by further adjusting the incorrect and unworkable figures with the aid of the incorrect and unworkable scale. This seems to indicate the pursuit of a proper goal with improper means. It may seem rather revolutionary, but it must be clearly stated:

If a metrical scale such as the currency scale is itself changing, that scale no longer serves as a measuring unit. Data derived from varying scales and adjusted somehow are pure patchwork. They may be useful for special considerations, e.g., comparisons, but they are not suitable to construct a consistent accounting system. It is necessary, therefore, to search for a stable measuring unit.

One possibility would be to use a foreign currency which may be regarded as stable. Many German companies preferred the United States dollar after World War I. Another proposal at that time was to select an appropriate commodity, e.g., gold, rye, or something similar. But today it seems impossible to find either a currency or a commodity with invariable scale units. The best method which is applicable permanently and without later alteration would, in the author's opinion, be to compute the price level with the help of a statistical index method and to convert all prices into those of a certain starting point of time as a reference base. By this we transform the legal currency arithmetically into an index or accounting currency. We may speak then of a common, a uniform, or an index dollar designating the homogeneous scale unit.

Using the price level figure (shown in Exhibit 1, line 11), we multiply all individual book figures in legal face (tender) value with the reciprocal of the level figure. This coefficient is identical with the pro-

portionality factor c of the functional transformation group $x' = cx$ mentioned above.

There are profound distinctions between an overall balance sheet stabilization, an adjustment of expenses by current prices on one hand and the detailed stabilization of each entry advocated here on the other. Accounting Research Study Number 6 emphasizes especially the contrast between current price valuation and stabilization of the currency unit in a particular chapter with the heading: "Replacement Cost a Separate Problem."[7] Replacement or current prices are — in the author's opinion and contrary to the views of F. Schmidt — neither appropriate nor adequate to solve the stabilization problem. This point implies the different problem of real income determination discussed later.

There are, for instance, many questions regarding the techniques to be chosen. They concern (1) the period of index computation, whether yearly, monthly, or even daily; (2) the basic period as a stable reference line; (3) the distinction between general and special indices; and (4) the detailed procedures of price conversion, whether more specified or roughly aggregated. The problems of a statistical and technical nature will not be discussed in this paper. It may be sufficient to justify briefly the author's reasons for the following explanations.

It seems preferable to use a general index because the legal currency to be replaced also reflects a general purchasing power as a total average. The specific money value for a particular commodity is expressed by the relative price rather than by the price level. Furthermore, the author would advocate the same uniform basic price level as 100 percent for all price conversions over several years, namely at the beginning of index accounting, in order to secure the comparability of all figures at any given point of time as well as over a number of periods or years in the sense previously expressed.

SURVEY

Specific German methods of income determination first enunciated by scholars, such as Schmalenbach, Mahlberg, and F. Schmidt, and which the author further developed and combined into a self-contained multiple system of accounting will now be discussed. The first step is the distinction between two types of income — nominal and real. Related to this differentiation, the problem of profit distribution will also

[7] AICPA, *Accounting Research Study Number 6,* 1963, p. 29. See also Richard Mattessich, *Accounting and Analytical Methods,* Homewood, Illinois: Richard D. Irwin, Inc., 1964, pp. 180-81.

be discussed. The second step leads to the development of stabilized income determination, both on nominal and real basis, in addition to the traditional treatment of financial accounting. In this way, a fourfold accounting system results and can be systematically developed. Sweeney[8] had made similar proposals in 1936 using the ideas of the German authors mentioned above, but not quite in the same way as developed here.

NOMINAL INCOME DETERMINATION WITH A LEGAL CURRENCY SCALE

The presupposition of a stable money value is the starting point. The individual market prices, however, may change relatively. Then we must distinguish between two different income concepts. The first one is the goal of the traditional form of income determination. It uses, in principle, historical prices related to the date of acquisition with goods and services consumed and to the date of sale with commodities and finished products, i.e., for both sides of the income statement, for expenses and revenues. Consequently, the assets and equities of the balance sheet are valued in the same way. The income computed on this valuation base may be labeled nominal income because the initial face or nominal values are decisive. These historical values remain unchanged during the entire accounting process.

The value content assigned to the goods produced and consumed is measured in terms of dollars as legal currency scale units. In this context the term "legal" refers to the legal validity of the currency and especially to the unchanging face value of the currency unit regardless of its purchasing power. Later on, these measurement units will be distinguished from stabilized monetary scale units where the adjective "stabilized" indicates the adjustment of the legal currency scale units by index numbers according to the extent of price-level changes.

In Germany one speaks of the principle of nominal maintenance of capital because the nominal income amount represents the recovery of the monetary investment. The nominal amount of expenses actually paid is retained to replace the consumed input of goods and services. Only the excess of the revenues over the nominal capital contained in expenses is said to be profit and available for distribution in this sense. It is to be stressed that the actual replacement of input is not implied here since this procedure is a process of activity and not a problem of computation. Maintenance is to be understood as the delimiting borderline between profit and expense. The retention of earned nominal

[8] Henry W. Sweeney, *Stabilized Accounting,* New York and London: Harper & Brothers, 1936.

capital offers only the possibility to replace expenses with the retained nominal amount.

The nominal income considered here, in its true meaning, must be interpreted as realized income. The principle of realization of profit corresponds to Principle A of Sprouse and Moonitz[9] who critically discuss the point of time with respect to the attributability of profit. Bedford[10] deals intensively with the same problem, too. Edwards and Bell[11] also formulate their term of accounting profit in the sense of traditional accounting as realized profit consisting of realized operating profit and realized capital gains.

In this presentation the doctrine of conservatism or, as it is called in Germany, "the principle of caution," which requires the valuation of current assets at lower actual acquisition prices, is excluded because this valuation method leads to unrealized losses and, in consequence, even to unrealized profits. So as not to disturb the unity of this discussion, this valuation problem — which, the author believes, lies on a quite different level of thought — shall not be considered.

The following example is greatly simplified to emphasize the fundamental points of the author's contentions (Exhibit 2). In the income statement only two total figures are assumed as expenses and revenues each. In the balance sheet there are only three items: Assets, liabilities and owners' or stockholders' equity. The nominal income (profit) in legal currency amounts to $10,000, i.e., 10 per cent on nominal capital of $100,000.

REAL INCOME DETERMINATION WITH A LEGAL CURRENCY SCALE

The second concept of income is the real (or physical) income on the basis of a stable money value. It considers the current market prices on the expense side. All expenses are converted into the acquisition prices of the particular day of sale. In that way, both revenues and expenses are coordinated and timed by prices of the same day, the realization day. This accounting system determines, therefore, a realized income too. Only the valuation of expenses is different from the nominal system.

In Germany one speaks of the principle of real (or physical) maintenance of capital. The sense of this principle is here also to determine the borderline between profit and expense. The real value of expenses

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[9] Robert T. Sprouse and Maurice Moonitz, *op. cit.*, pp. 13-17 and 55.

[10] Bedford, *op. cit.*, pp. 31-33, 46, 65 and 94-96.

[11] Edgar O. Edwards and Philip W. Bell, *The Theory and Measurement of Business Income*, Berkeley: University of California Press, 1961, pp. 115-18.

Exhibit 2

Income Statement

Expenses		Revenues	
Cost of sales	$ 75,000	Sales	$ 89,000
Cost of sales	40,000	Sales	36,000
Nominal, legal profit	10,000		
	$125,000		$125,000

Balance Sheet

Assets		Equities	
Various assets	$400,000	Liabilities	$290,000
		Owners' equity	100,000
		Nominal, legal profit	10,000
	$400,000		$400,000

at current prices is retained to secure the possibility of replacing the input of goods and services at these prices. With rising market prices there is a better chance to recover the consumed resources substantially rather than nominally. The actual replacement depends, of course, on the corresponding activity by the decision-making individuals.

The difference between expenses at current and those at historical prices does not represent real income and is, therefore, pseudo or fictitious income. This difference should be viewed as a capital surplus or adjustment transforming the nominal into real capital. These capital value changes must be regarded here as unrealized by the market. But it is important to know that the value difference is genuine realized nominal income from the viewpoint of the nominal concept of income.

For reasons of simplification, it is assumed that there were only two selling days relating to the revenue items (Exhibit 3). The current prices of expense goods and services have increased by approximately 10 percent. The result is a real loss of $3,000 instead of a nominal profit of $10,000 as shown in Exhibit 2. The difference of $13,000 represents a fictitious profit or a capital surplus.

To obtain an appropriate base for the income rate on capital, it is also useful to convert assets and liabilities into current prices. The best date would be the last day of the year, the effective date of the balance sheet. The conversion difference of $20,000 does not represent real

Exhibit 3
Income Statement

Expenses		Revenues	
Cost of sales	$ 83,000	Sales	$ 89,000
Cost of sales	45,000	Sales	36,000
		Real, legal loss	3,000
	$128,000		$128,000

Balance Sheet

Assets		Equities	
Various assets	$450,000	Liabilities	$320,000
Real, legal loss	3,000	Owners' equity	100,000
		Expense adjustment	13,000
		Balance adjustment	20,000
	$453,000		$453,000

income but rather a capital adjustment just as the expense difference discussed above does.

Two cases of additional equity figures, therefore, must be clearly distinguished: expense adjustments and balance sheet adjustments. Expense adjustments convert the nominal into real income. Nominal income minus expense adjustments equals real income ($10,000 — $13,000 = $ — 3,000). Expense adjustments characterize the distinction of two different income concepts. But balance adjustments have no influence on the income at all. To determine the real income, it is not necessary to convert balance sheet items. The conversion of assets and liabilities into current market prices has nothing to do with income determination. The real income is defined as realized income, and the balance conversion difference would be an unrealized figure.

The real capital is $100,000 + $13,000 + $20,000 = $133,000. The real loss rate equals 2.3 percent on real capital.

It is interesting to compare this procedure with the concepts of Edwards and Bell.[12] These authors distinguish the current operating

[12] Edgar O. Edwards and Philip W. Bell, *op. cit.*, pp. 110-22. The authors distinguish between the realized profit resulting from operating activities within the production process and capital gains accruing from holding activities to be regarded as unrealized or realizable respectively. In this paper only the realized operating profit is involved.

Exhibit 4
Income Statement

Expenses		Revenues	
Cost of sales	$ 60,000	Sales	$ 89,000
Cost of sales	32,000	Sales	36,000
Real, legal profit	33,000		
	$125,000		$125,000

Balance Sheet

Assets		Equities	
Various assets	$315,000	Liabilities	$230,000
Expense adjustment	23,000	Owners' equity	100,000
Balance adjustment	25,000	Real, legal profit	33,000
	$363,000		$363,000

from the accounting profit. Nominal income corresponds to accounting profit, which is realized. Real income is similar to current operating profit, also realized. But Edwards and Bell regard the balance adjustments as realizable capital gains (identical with realizable cost savings) and add them to current operating profit to obtain business profit. The business profit would be $20,000 − $3,000 = $17,000. It is essential, however, to note that these realizable gains are not realized but are actually unrealized gains.

If we assume, as a contrast, decreasing market prices of approximately 20 percent, the adjustment items in the balance sheet appear on the asset side. They are now deductions from the nominal owners' equity (Exhibit 4). The real profit is $33,000 and the profit rate 63.5 percent on real capital of $100,000 − $23,000 − $25,000 = $52,000. There is a pseudo loss of $23,000.

DISTRIBUTION OF PROFIT

Two problems should not be confused but clearly separated: (1) the determination of the earned income, and (2) its distribution to owners and stockholders. They must not be mixed with one another. The different problems of profit distribution to creditors, consumers, employees, and to the state, as well as those of use in the enterprise itself, are excluded here.[13]

[13] Bedford devotes an entire chapter to this central point in his book: *Income Determination Theory: An Accounting Framework, op. cit.*, pp. 178-93.

Exhibit 5

Income Statement (First year)

Expenses		Revenues	
Cost of sales	$ 75,000	Sales	$ 89,000
Cost of sales	40,000	Sales	36,000
Nominal, legal profit (earned)	10,000		
	$125,000		$125,000

Balance Sheet (First year)

Assets		Equities	
Various assets	$400,000	Liabilities	$290,000
Loss (distributable)	3,000	Owners' equity	100,000
		Reserve for expense valuation	13,000
	$403,000		$403,000

The determination problem is a polymorphic and ambiguous problem because it is necessary to define exactly the concept of income to be measured. Two alternatives are, for instance, the nominal and the real income notions. There are many other possibilities which cannot be discussed in this article. The selection depends on the purpose of the income statement, i.e., the goal pursued by management. This selection should not be fused with the managerial decision on distribution or distributability of income but should be concentrated only on the definition of earned income reflecting the overall result attempted and achieved by enterprise activities.

The distribution problem is a problem of financing and capital disposition associated with the question of capital maintenance. The latter aspect is directed to the consideration of what part of the earnings should be retained to recover the expense goods and services. By separating the two problems, it is possible to combine nominal income determination with real capital maintenance within the same accounting system.

Let us assume that the market prices for materials, labor, and overhead are increasing. If a company regards the nominal income as fully available for distribution, new capital investment is required to recover substantially the goods and services consumed in production. The new

capital could be the result of higher liabilities or an increase of owners' equity. But it is also feasible to coordinate nominal income determination with real recovery by increasing and reducing reserves in the sense of retained earnings. Using the example in Exhibit 2, we can create a reserve account with the entry of the expense valuation difference of $13,000 (Exhibit 5). A balance sheet valuation difference does not appear. The amount to be entered in the reserve account may be computed separately. In spite of a nominal profit of $10,000 earned by the enterprise, there is no distributable profit as shown in the balance sheet. Theoretically, a loss of $3,000 would be available for distribution.

We may assume for the next year a nominal profit of $12,000 and a negative expense valuation difference of $6,000 because of decreasing prices (Exhibit 6). A larger amount ($15,000) is distributable, therefore, as the entries of the reserve account indicate. This amount may

Exhibit 6

Income Statement (Second year)

Expenses		Revenues	
Cost of sales	$103,000	Sales	$115,000
Nominal, legal profit (earned)	12,000		
	$115,000		$115,000

Balance Sheet (Second year)

Assets		Equities	
Various assets	$395,000	Liabilities	$273,000
		Owners' equity	100,000
		Reserve for expense valuation	7,000
		Distributable profit	15,000
	$395,000		$395,000

Reserve Account (Second year)

Expense valuation difference	$ 6,000	Carried forward from the balance sheet	$ 13,000
Transfer to the balance sheet	7,000		
	$ 13,000		$ 13,000

also be derived from the nominal profit as follows:

nominal profit in income statement	$12,000
— loss carried forward	3,000
	9,000
+ expense valuation difference	6,000
distributable amount	$15,000

Accounting figures only present information for managerial purposes. They do not force any definite action. What amount shall be actually distributed is a question for the decision-makers and is dependent on many other circumstances and conditions. Distributability in the described sense is only one of the viewpoints to be considered by management.

STABILIZATION OF ACCOUNTING DATA

We may now assume an unstable money value, i.e., the value of the currency unit is changing. Then each entry in the accounting records must be converted on the day of occurrence by a stable index scale. This requires a division by the price-level index number, called conversion denominator, e.g., 1.4 for a decreasing money value (of 40 percent) or .8 for an increasing money value (of 20 percent) respectively. In this way all accounting data are expressed in stable units, i.e., at historical stabilized prices. Now it is both possible and reasonable to accumulate and compare these homogeneous figures, especially for the determination of the nominal income.

Before giving an example, it should be stressed that realized money value losses or gains do occur, but only in relation to monetary assets and liabilities. Let us assume a decreasing or inflationary currency value. First, we shall examine cash and receivable accounts (Exhibit 7).

To account for the money value loss that has occurred, it is necessary to convert the cash balance of $7,100 — expressed at face value — into a stable value at historical prices, i.e., $5,670. We have for the current year:

Legal Dollars	*Denominator*	*Stabilized Dollars*	*Denominator*	*Stabilized Dollars*
3,200	Balance* 1.2	2,670	1.4	2,280
3,900	Last entry 1.3	3,000	1.4	2,790
7,100	At dates of occurrence	5,670	At the balance sheet date	5,070
	Realized money value loss	1,660	Unrealized money value loss	600
	Stabilized balance	7,330	At occurrence dates	5,670

* ($10,000 – $7,200 + $6,000 – $5,600 = $3,200)

Exhibit 7

Cash

Legal Dollars	Denominator	Stabilized Dollars	Legal Dollars	Denominator	Stabilized Dollars
10,000 (1)	1.0	10,000	7,200 (2)	1.2	6,000
6,000 (3)	1.2	5,000	5,600 (4)	1.2	4,670
3,900 (5)	1.3	3,000	7,100 Balance	Historical	5,670 } 7,330 Balance
				Stable loss	1,660 }
19,900		18,000	19,900		18,000

Receivables

Legal Dollars	Denominator	Stabilized Dollars	Legal Dollars	Denominator	Stabilized Dollars
12,000	1.2	10,000	6,000 (½)	1.5	4,000 } 5,000 (1.2)
				Stable realized loss	1,000 }
			6,000 (½) Balance	Historical	5,000 (1.2)
12,000		10,000	12,000		10,000

Exhibit 8

Equipment (entries in 3 consecutive years)

Legal Dollars	Denom-inator	Stabilized Dollars	Legal Dollars		Denom-inator	Stabilized Dollars
12,000	1.2	10,000	3,600	(1)	1.2	3,000
			3,600	(2)	1.2	3,000
			3,600	(3)	1.2	3,000
			1,200	Expected disposal value		1,000
12,000		10,000	12,000			10,000

Disposal of Equipment

Legal Dollars	Denom-inator	Stabilized Dollars	Legal Dollars	Denom-inator	Stabilized Dollars
1,200	1.2		3,000	Sale 1.5	
	Expected disposal value	1,000		Realized disposal value	2,000
1,800	Profit on disposal value	1,000			
3,000		2,000	3,000		2,000

Cash

Legal Dollars	Denom-inator	Stabilized Dollars	Legal Dollars	Denom-inator	Stabilized Dollars
3,000	1.5	2,000	12,000	1.2	10,000

Income Statement

	Legal Dollars	Stabilized Dollars
	1,800	1,000

Because the stable cash balance should be $7,330, there is a realized loss of $1,660 and an unrealized money value loss of $600 in stable units. As soon as the disbursement has taken place, the loss immediately becomes established for all time.

For receivable accounts, we need to separate the amounts redeemed in cash from the opening balance, $6,000 in the example. The redemption of $6,000 contains a realized loss of $1,000 in stable units. We obtain

Legal Dollars	*Denominator*	*Stabilized Dollars*
6,000	1.2 occurrence date	5,000 historical
	Unrealized money value loss	1,670
	1.8 balance sheet date	3,330 current

But the stable value difference of $1,670 cannot be regarded as realized because no cash transaction has taken place until the year-end.

Correspondingly, the same method is used with liability accounts. The only difference is the opposite effect (money value gain) will occur when the price level rises.

It is the author's opinion that no stable money value loss should be computed on monetary assets and liabilities because no one can predict what will occur with the balance sheet in future. Only those monetary transactions which appear as disbursements for cash accounts and as cash redemptions for receivable and liability accounts should be considered as realized. Value differences on inventories and other balance sheet items should be viewed as unrealized or realizable. An unrealized loss may even turn into a realized gain if the currency increases in value later on. Suppose for an account receivable $5,000 is the historical value and $3,330 is the current value of the receivable in stable index money. If we must write off uncollectable accounts, we must distinguish between historical and current values in both legal and index money amounts.

A final example for equipment accounts will be given (Exhibit 8). The depreciation pattern for a machine is assumed to be:

Year	*Legal Dollars*		*Stabilized Dollars*
1	3,600		3,000
2	3,600		3,000
3	3,600		3,000
Expected disposal value	1,200		1,000
Total cost	12,000	1.2	10,000

Both total costs are historical costs. The useful life is three years. The actual disposal value is $3,000 or $2,000 in stable units. Therefore, a stable book profit of $1,000 occurs whereas the face amount is $1,800.

The described procedure of stabilizing book entries and accounts with the help of price index numbers is also demonstrated by Bierman[14] under the title "Common Dollar Accounting." He adjusts all accounts, however, with a price index at the end of the accounting period. The opening balance and each transaction are expressed in terms of year-

[14] Harold Bierman, *Financial and Managerial Accounting,* New York: Macmillan, 1963, pp. 593-605.

Exhibit 9

Income Statement

Expenses			Revenues		
Legal Dollars	Denominator	Stabilized Dollars	Legal Dollars	Denominator	Stabilized Dollars
75,000	1.5 historical	50,000	89,000	1.7 sale	52,353
40,000	1.6 historical	25,000	36,000	1.8 sale	20,000
	Realized money value loss on monetary values	3,330			
10,000	Nominal, legal profit			Nominal, stable loss	5,977
125,000		78,330	125,000		78,330

Balance Sheet

Assets			Equities			
Legal Dollars	Denominator	Stabilized Dollars		Legal Dollars	Denominator	Stabilized Dollars
400,000	Various historical	260,000	Liabilities	290,000	Various historical	182,644
			Owners' equity	100,000	1.2 historical	83,333
	Nominal, stable loss	5,977		10,000	Nominal, legal profit	
400,000		265,977		400,000		265,977

end purchasing power. This is done by multiplying the historical dollar amount by the ratio of ending-price index to the price index at the time of the transaction. Jones[15] presents a thorough and detailed analysis of the force of inflation on monetary and non-monetary accounts computing purchasing power gains and losses in uniform dollars based on index numbers related to year-end or to a fixed prior date respectively.

NOMINAL INCOME DETERMINATION WITH A STABILIZED SCALE

With the help of price conversions (related to the changing price level), we achieve the possibility of developing a nominal income determination with historical prices at transaction dates in legal currency as well as in stabilized index figures (Exhibit 9). For purposes of simplification, only two transaction dates are distinguished on both sides of the income statement. For example, a realized money loss in stabilized units is inserted. The sum of $3,330 is arbitrarily inserted as an example. The various denominators in the balance sheet refer to different dates of transaction and provide historical values.

REAL INCOME DETERMINATION WITH A STABILIZED SCALE

The same procedure of index conversion allows the development of a real income determination system (Exhibit 10). Here we clearly see the distinction between historical and current prices both in legal and in index money units. The simplification is the same as previously noted: two selling dates with the denominators 1.7 and 1.8. The expenses must be converted to the prices of these dates. In the balance sheets, however, the same denominator (1.8) at year-end is used for all items with the exception of the owner's equity which is converted at 1.2.

The rising legal prices of goods and services can be attributed in this example to an increasing price level or decreasing money value, respectively, as well as in part to falling relative prices at the stabilized value. This indicates that legal prices have increased less than the price level.

CONCLUSION

Combining both types of income determination within one accounting system, demonstrated in Exhibits 9 and 10, one can arrive at a fourfold income determination presented in four parallel columns: the

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[15] Ralph C. Jones, *Effects of Price Level Changes on Business Income, Capital, and Taxes,* New York: American Accounting Association (AAA), 1965, pp. 19-133.

Exhibit 10

Income Statement

Expenses			Revenues		
Legal Dollars	Denominator	Stabilized Dollars	Legal Dollars	Denominator	Stabilized Dollars
83,000	1.7 sale	48,824	89,000	1.7 sale	52,353
45,000	1.8 sale	25,000	36,000	1.8 sale	20,000
	Realized money value loss on monetary values	3,330	3,000	Real, legal loss	
				Real, stable loss	4,801
128,000		77,154	128,000		77,154

Balance Sheet

Assets			Equities		
Legal Dollars	Denominator	Stabilized Dollars	Legal Dollars	Denominator	Stabilized Dollars
				Liabilities	
450,000	1.8 year-end	250,000	320,000	1.8 year-end	177,777
	Expense adjustment	1,176		Owners' equity	
			100,000	1.2 historical	83,333
	Balance adjustment	5,133	13,000	Expense adjustment	
3,000	Real, legal loss				
	Real, stable loss	4,801	20,000	Balance adjustment	
453,000		261,110	453,000		261,110

Exhibit 11

Income

	Stabilized Dollars	*Legal Dollars*	*Money Value Loss*
Nominal	−5,977	+10,000	−15,977
Real	−4,801	− 3,000	− 1,801
Price changes influence	−1,176	+13,000	−14,176
	Pseudo loss (stable prices decrease)	Pseudo profit (legal prices increase)	

Capital base and return rate (in per cent)

	Stabilized Dollars	*Rate*	*Legal Dollars*	*Rate*
Nominal	83,333	−7.2	100,000	+ 10
Real	77,024	−6.6	133,000	−2.3

external and official method in legal currency and the internal and managerial approach in stabilized index scale, both of them on the nominal base with historical prices as well as on the real base with current prices for expenses. Correspondingly, capital, as a reference figure, is computed in the four balance sheets not only in currency and index values but also in nominal and real aspects. Comparison permits the judgment of several decisive viewpoints concerning capital maintenance and profit distribution and, above all, those relating to price level influences (Exhibit 11). Differences between nominal and real income indicate the effects of price changes in the form of pseudo profit and loss. Deviations of stabilized from legal income represent money value loss (or profit).

The comparison of both exhibits clearly shows the essential difference stressed above between real income determination and money value stabilization. The first one is a problem of income definition, the second a problem of the value measuring unit. Both problems may be associated when computing the stable real income of $ — 4,801 index units in contrast to the legal (unstabilized) nominal income of $10,000.

Edwards and Bell[16] specifically assert that price level changes play only a subsidiary role because operating profit requires no adjustment. Only capital gains (and cost savings) need price level corrections. The reason for their theoretically erroneous opinion is the practical fact that these authors use a yearly average index number for all revenue and expense items rather than prices at individual transaction dates. The decisive issue, overlooked in their analysis, is that the general index numbers employed for price level measurement must reflect the total average of purchasing power whereas special index numbers for individual resources and products of a firm include only these items in order to find their average current prices. The two viewpoints should, in the author's opinion, not be confused.

The distribution problem already discussed on the legal currency base is true further with stabilized figures. It is possible here, too, to establish reserves for the real recovery of expenses within the nominal accounting system. As in Exhibit 5, we could combine Exhibits 9 and 10 in the manner shown in Exhibit 12. Theoretically, the distributable loss would be lower because of decreasing stabilized prices. It must be noted that stabilized income determination prevents the dangerous erosion of capital in all cases where price levels rise. The problem of real income dependent upon relative prices is again superimposed on that of price level changes. Both, real and stabilized ac-

[16] Edwards and Bell, *op. cit.*, pp. 124 and 234.

Exhibit 12

Income Statement

Expenses: Legal Dollars	Denominator	Stabilized Dollars	Revenues: Legal Dollars	Denominator	Stabilized Dollars
75,000	1.5 historical	50,000	89,000	1.7 sale	52,353
40,000	1.6 historical	25,000	36,000	1.8 sale	20,000
	Realized money value loss on monetary values	3,330			
10,000	Nominal, legal profit			Nominal, stable loss	5,977
125,000		78,330	125,000		78,330

Balance Sheet

Assets: Legal Dollars	Denominator	Stabilized Dollars	Equities	Legal Dollars	Denominator	Stabilized Dollars
400,000	Various historical	260,000	Liabilities	290,000	Various historical	182,644
	Reserve for expense valuation	1,176	Owners' equity	100,000	1.2 historical	83,333
3,000	Stable loss (distributable)		Reserve for expense valuation	13,000		
403,000		265,977		403,000		265,977

counting, endeavor to assist in the avoidance of the depletion of invested capital.

It is evident that the stabilized reserve for expense adjustment of $1,176 is an asset item because it represents a negative adjustment figure to owners' equity of $83,333. The position of the reserve balance in the balance sheet depends on the tendency of relative price changes, declining in the numerical example, whereas the nominal reserve is a positive equity item.

The described fourfold accounting system is independent of the recording techniques to be chosen. It is left undecided whether or not the adjusted figures are entered in the ledger. In any case, the ordinary accounts of the legal nominal accounting remain entirely unmolested and contain exactly the same information as before. This is in conformity with the Modified Principle 6 of the Illinois Study Group.[17] Practice and pragmatic considerations must develop several appropriate technical procedures which may be applied under various conditions to enterprise realities. The goals to be achieved, however, are inevitable and unshakable.

[17] *A Statement of Basic Accounting Postulates and Principles, op. cit.*, pp. 29-30. See also Littleton and Zimmerman, *op. cit.*, pp. 189-90, who stress that all adjustment approaches should not interfere with the ordinary accounts but present only supplementary analyses to the unmodified usual financial statements.

The Significance of Interrelated Concepts in Accounting

A. C. LITTLETON*

Accounting concepts should perhaps be considered as elements which give meaning to accounting principles because concepts are more basic than principles. Concepts are directly knowable from experience and in accounting, as elsewhere, whatever we know with assurance, we need not assume.

Certain concepts are basic because they can be recognized as lying near to the heart of accountancy. Moreover, their interrelations reflect patterns which can be described and studied. Such interrelations among ideas can suggest ideological structures. If elements such as concepts are structurally associated, they can support (explain, justify) the related technical actions through which enterprise accounting exercises its functions. In this manner, the basic and compelling ideas tend to unite all aspects of accounting into an effective discipline.

Accountancy is not accurately defined as "a body of technical actions guided by custom and rules." Nor is it well described as a method of calculating profits. Doubtless, men plan specific actions and take risks based upon their judgment of the possibility and probability of a profitable result. Profit may provide men with motivation, but the calculation of profit is not the central theme of accountancy. Enterprise accountancy is better viewed as an organized structure of concepts

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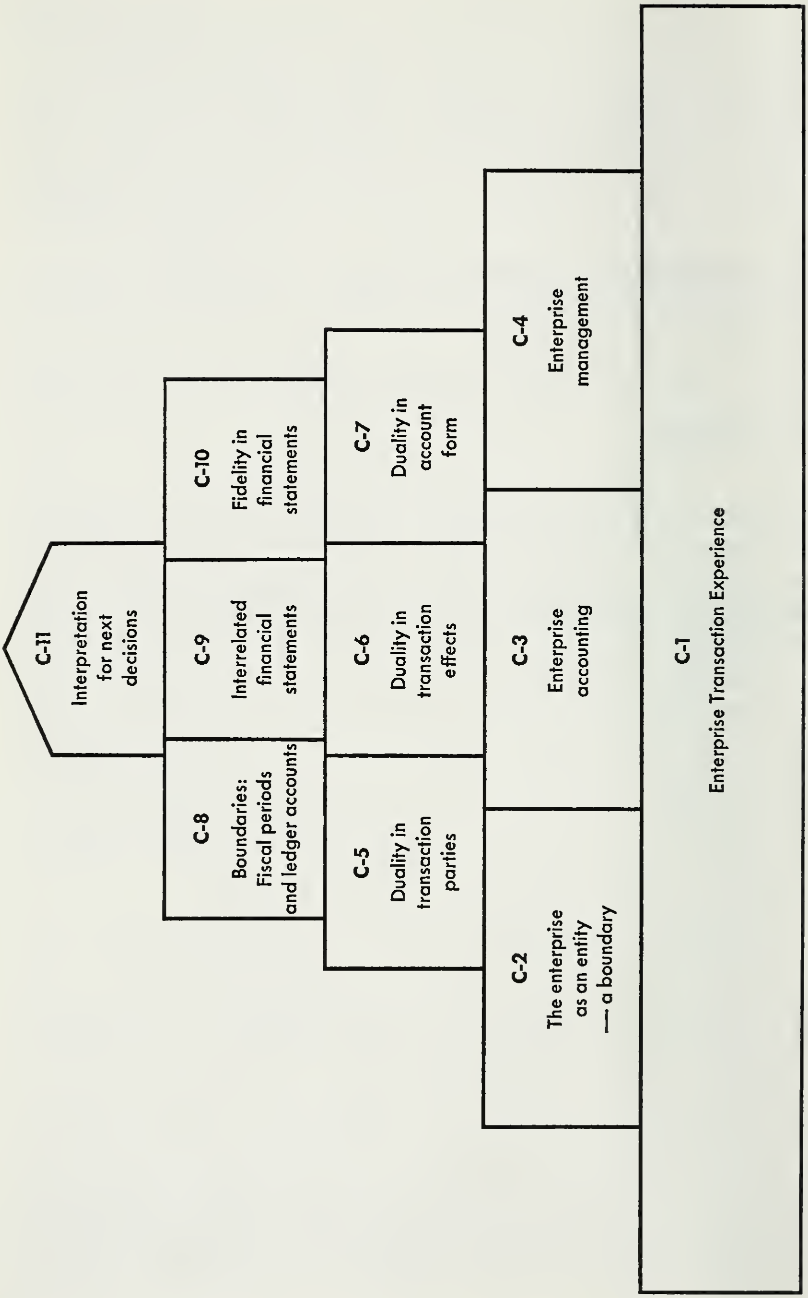

Exhibit 1. Accounting Concepts

which (1) express compelling objectives capable of sponsoring effective technical actions for dealing informatively with transaction experience data, and (2) support desirable, constructive limitations on these actions.

The impulse to seek interrelations among the basic concepts related to enterprise accounting comes from the need for clues to "deeper-than-surface" details of the accounting function, and the need for clues as to how accounting can help men to benefit from the meaning residing in a segment of enterprise transaction experience.[1]

FOUR ACCOUNTING CONCEPTS

If accounting concepts are interrelated enough to constitute a structure, this association of parts, as in the case of a stone wall, should be based upon a firm foundation. Such a foundation (see C-1, Exhibit 1) could very appropriately be: The power inherent in the knowledge of the results of the prior transaction experience of a given business enterprise.

We know that we can learn from experience. This truth so often has been demonstrated that it can safely be considered as an aspect of the function of enterprise accounting — more as an explanation, however, than as a definition. Accounting, from its earliest usage, has been dedicated to making possible the analytical study of enterprise transactions. The objective of such study has continued to be the interpretation of prior experience to obtain a helpful base for next decisions.

The fact that transaction experience, when organized by accounting, has the power to aid business decisions would seem to express clearly a principle in the usual dictionary definition, "a truth that is a foundation for other truths." Power to aid decisions provides an influential type of motivation. Yet this phrase itself, if too broadly interpreted, could lead to a serious over-extension of the accounting concepts of admissable data. No assertion of the possible immediate usefulness of data not derived from the transaction experience of the given enterprise could justify reporting such information other than as interpretative supplements to the data representing actual transaction experience of that enterprise — however informative such information might be considered by readers of financial statements.

[1] "As science aids men to understand the forces of nature and then lead to use applications, so accounting theory should aid men clearly to understand and to use accounting techniques within the boundaries of their logical limitations," A. C. Littleton, "The Continuing Importance of Basic Concepts," *The International Journal of Accounting Education and Research* I (Fall, 1965), p. 64.

In the structural representation of basic accounting concepts the floor (C-1) may be viewed as the necessity for (or the power of) the specific knowledge. The next tier consists of three subsections, each a concept of an operational element. Included here is the concept (C-2) of a business enterprise as a self-contained operating unit (entity) whose transaction experience is limited by the decisions and acts of its management. This concept establishes strict boundaries for the transaction experience entering the enterprise's accounts. Only transactions of which that enterprise has been a participating party can provide appropriate experience data for its accounts. The violation of those limits could grossly distort the reading of the meaning that lies within recorded enterprise transaction experience.

Another element in this tier of the pattern (C-4) is the concept of enterprise management — the human factor whose decisions and actions initiate the items of enterprise transaction experiences.

The major function of management is to generate transaction experience of two kinds: (1) those which constitute efforts to achieve enterprise service objectives (revenue charges), and (2) those which provide evidence of an objective achieved (revenue earned). Without having satisfactorily produced this relation between efforts and results, management will have failed in the performance of its basic function.

Between the concept of enterprise entity and the concept of enterprise management stands the concept of enterprise accounting (C-3) — the connecting link between an enterprise as an organized entity and management as the operator of that entity. Accounting organizes data from the transaction events generated by management's decisions. The function of accounting here is to make prior transaction experience readable, i.e., useful to interested parties. Such data are first made useful by being properly marshalled into appropriately named accounts.

Management is interested in being able to review the results of its prior decisions. Investors are interested in evidence of management's competence as this is reflected in the reports of financial position (balance sheet) and the reports of earnings (income statement).

It should be repeated that basic accounting concepts are ideas which are essential to understanding accounting functions and limitations. The major significance here is not so evident in the phrasing of individual concepts as in interrelations among concepts. Each idea of this type draws meanings from all of its structural contacts with other concepts — both near or farther away. This is evident in the first four concepts.

INTERRELATED CONCEPTS

The usefulness inherent in a knowledge of enterprise prior experience constitutes the basic justification for enterprise accounting. This reason for being can serve as the conceptual floor or foundation which supports a larger structure of other compelling concepts.

The three concepts shown in the second tier of the diagram draw significance both from their relation to the first tier (the foundation on which they stand) and their relation to each other. These three concepts also gain significance because of their basic support of the several concepts noted above.

The entity concept (C-2) differentiates the activities of one enterprise from those activities of all others. The management concept (C-4) is strongly tied to the entity concept by its responsibility for the transaction experiences of that entity. The concept of enterprise accounting (C-3) is the connecting link between the entity's transaction experience and management, as the originating force of the transactions.

It seems reasonable, therefore, to consider these three concepts and the "floor" or fundamental concept as uniting in expressing a principle[2] of system structure whose operating components would logically rest on the base formed by these four concepts.

DUALITY AND ACCOUNTING CONCEPTS

The next higher tier in the pattern indicates three concepts related to aspects of duality.

An initial duality is present in each transaction because an agreement between two parties is necessary to create an item of transactions experience (C-5). Clearly associated here is the concept of duality in transaction effects (C-6). For each party, a given transaction positively influences some element and negatively influences some other element in the enterprise. Probably because of the force of this concept (C-6), ledger accounts (C-7) are uniformly bilateral — one column for recording favorable effects in that category, the other for reporting unfavorable effects in that category.

The fundamental nature of all enterprise transactions dictates the representation of accounts in bilateral form.[3] This feature very defi-

[2] A principle of accounting could usefully be considered as a statement of a relationship expressing a meaningful association of separate, compelling concepts.
[3] For a thorough discussion of the technical and theoretical aspects of accounts, see Karl Käfer, *Theory of Accounts in Double-Entry Bookkeeping,* Urbana, Illinois: Center for International Education and Research in Accounting, 1966.

nitely helps accounts to reflect a record of the duality which is inherent in every consummated transaction. This technical characteristic definitely contributes to the usefulness of accounting data. In this manner every transaction is made to reflect, by the placement of its data in specific accounts, (1) the intention of management to affect the enterprise in a certain desirable way, and (2) to reflect the necessary, though undesired, consideration that is required in order to persuade the other transaction party to deal or strike a bargain.[4]

The action by accountants in bringing these dual effects into the proper accounts is a mental process of transaction analysis. It involves recognizing the dual effect of each transaction, and a knowledge of the accounts most appropriate to record those effects. Also involved is the accountant's persistent concern for the integrity of (1) the assigned data, (2) the assignment of the data to proper accounts, and (3) the ultimate organization of account data into periodic financial statements. The latter are the primary means for many parties to learn the facts concerning management's effectiveness in the enterprise of their interest.

PRESERVING THE INTEGRITY OF ACCOUNTING DATA

The three elements in the next tier of the pattern of concepts may be considered to involve aspects of preserving the integrity of reported transaction experience. It could, perhaps, be said that integrity is an expression of an important principle — consistency. Surely, consistency in the interrelations among accounting concepts could be an important factor in assuring readers of financial statements of the dependability of the data.

The concept of boundary significance (C-8) seems particularly appropriate to enterprise accounting. A specific transaction (the basic source of account data) by reflecting an agreement by two independent parties gives accounting data their initial integrity.

The concept of an account includes, in addition to its bilateral form and descriptive name, an implied obligation for accountants to be certain the recorded transaction data faithfully adheres to the intent and boundary limitations implicit in the account title.

The accounting concept of fidelity to necessary boundaries also extends to the fiscal period. It is misleading to record a transaction in

[4] Long ago someone noticed the entries in accounts were always made in pairs — thus the term "double entry." Can "doubleness" be a principle? Or is it only a concept expressing an obvious duality necessarily inherent within every transaction consummated by independent contracting parties?

one period when its nature relates it wholly to another period or partly to several periods. Maintaining the integrity of logical boundaries is an accounting obligation.

When the integrity of the data for a fiscal period is in doubt, the integrity of the financial statements of that period also is flawed (C-9). Moreover, inadequacy or error in the statements of one fiscal period affect their interpretative value in relation to statements of neighboring fiscal periods.

Questions of statement fidelity may also arise from data erroneously included, or from lack of consistency in data arrangement (C-10). The comparability of successive reports is highly significant for interested parties.

Many important aspects of a business enterprise cannot suitably be put into the financial statements. Some of these data could usefully be disclosed by brief footnotes. Other data, especially those which are not elements of actual transactions of the given enterprise, can be made available to statement readers in supplementary data or exhibits. In this way dependable transaction experience of the given enterprise, rather than being "manipulated," is helpfully and informatively reinforced by collateral data which would not give the impression of being transaction experience of the given enterprise.

COMPELLING CHARACTERISTICS OF THE CONCEPTS

The compelling characteristics of the ten basic concepts considered here draw their persuasiveness from (1) the individual significance of each concept and from (2) the relations which tie these concepts to groups and these groups into the larger pattern.

Such characteristics are not modern. Many basic concepts of need and usefulness clearly lie beneath very early accounting actions. Luca Pacioli (1494) left us a convincing description of the bookkeeping practices of his day. Modern methodology grew from such early roots as these.

Even that early, men used those records to satisfy the need here formulated (C-1) as the necessity for knowledge of enterprise transaction experience. In early foreign trading ventures, an operating entity (C-2) existed in the act of combining invested capital for a specific trading voyage. There was an active management (C-4) in the persons of promoters and investors. One variety of concept C-3 (enterprise accounting) also existed in the way records were made for the investments of individuals, records of results from barter exchanges abroad,

and results from the sale of the fruits of the voyage and from these data, the distribution of the proceeds to the investors.

Other types of business, committed to a permanent location and continuous operation, quite naturally departed from the type of accounting appropriate for a temporary venture operating for a specific purpose. The present characteristics of enterprise accounting stem from the second type of enterprise operation. In accomplishing this development, accounting has also tightened the relationships which associate a number of compelling concepts into a discernible structural pattern.

The features of duality (C-5, C-6, C-7), now so evident, were latent centuries ago in the accounting of business enterprise whose basic characteristic was continuity of operation. Other basic concepts, especially those related to "fidelity," are more closely associated with later developments. As more and more people required a knowledge of the results of the accumulated transaction experience of a given enterprise, strict concern for the conceptual boundaries of each account and each fiscal period (C-8) became more important. For the same reason, the integrity of periodic financial statements (C-9, C-10) came to be a matter of wide interest. It is this aspect which was largely responsible for the evolutionary development of auditing and the profession of public accounting.

Early writers on accounting described methods. They presented little or no theory (justification) as we know it. They did not analyze the inner nature of "duality." Yet the effects of the duality within a transaction were indicated very early by the form of the journal entry. And the posting of journal entries into ledger accounts, even in those days, brought favorable effects to the left side of some accounts and to the right side of other accounts as entries still do. Also, the early texts did not deal extensively with financial statements. Modern conditions have changed this attitude.

Consistency in restricting reported data to only that derived from actual transaction experience of the given enterprise has become a necessary concept. This is related to the extensive use today of financial statements by investors and their advisors. Also involved in the question of consistency are proposals often noted that many users of financial statements would welcome data closer to current replacement equivalents. To bring such data directly into the accounts would do violence to the more compelling concept, i.e., that the actual transaction experience of a business entity is, in fact, *reality* for that enterprise. Replacement prices, although quite useful in some cases, cannot be actual experience of the enterprise specific.

Consistency in the arrangement of account data in financial statements is another continuing need. This need stems from the conviction that the messages contained in accounting reports will be more readable if presented in comparable form period after period.

Data integrity becomes increasingly important as business becomes increasingly complex. Many users of financial statement data have a minimum awareness of the necessary limitations inherent in enterprise accounting. Often these users have very special ideas of the kinds of data which would be useful for their decision problem. But it does not follow that accounting itself should include, within the financial statements, data not originating in actual, prior transactions of the given enterprise.

Accounting cannot change its basic obligation to report factually on the efforts made in, by, and for the given enterprise with the intention of affecting its affairs in specific ways. To ignore this limitation would invite accounting to expand into the province of statistics. Surely this could only cloud its own service commitment. Such expansion would not only be a violation of the basic and compelling concepts of accounting but would in addition counteract their meaningful limitations. Moreover, such changes would be wholly unnecessary. The amount of supplementary and interpretatively helpful data is unlimited, but it needs to be kept outside of the basic functioning of enterprise accounting.

THE FINAL PATTERN

It is at this point that the "cap-stone" (C-11) of the structural pattern of concepts comes into view.

The interpretation of the past to aid in next decisions is indeed a significant concept of the focal point of the use of account data. But it is not a concept to be used to inject, directly into accounts or in the basic financial statements, data not derived from the actual transaction experience of the given enterprise.

The goal of accounting is to translate actual enterprise transactions events into entries in a series of interrelated accounts en route to presentation in compact financial statement summaries of the results of the actual transaction decisions of management. Only under such restrictions can accounting present dependable data of enterprise achievements. The interpretation of the significance of those achievements constitutes a separate function.

It would not change these limitations if accountants (professional and company personnel) were prepared to expand their services by

supplementing account data as such, with interpretative analyses of the evident significance of the changes readable from the latest financial statements and from comparative statements for recent years.

This very useful service would further implement the reason for keeping accounts (C-1). Accounting itself only undertakes to make understandable (i.e., open to interpretative analyses) the results of prior enterprise transaction experience as they have been created by the implementation of management decisions. We cannot logically claim that accounting is also charged with making enterprise experience fully understood. A separate, non-accounting activity must attempt to make the effects of management decisions understandable.

Income Determination Theory: Some Mathematical and Graphical Approaches

CHARLES WEBER*

In recent years income determination theory has gradually evolved to become one of the central issues of modern accounting theory. This applies not only in the United States, but in Europe as well. One of the recent valuable European studies, *The Accounting Concept of Profit,* was published by Palle Hansen.[1] This author went far beyond the typical postwar studies of price level changes to develop a general framework of a basic income accounting theory. The purpose of his study was to make "an evaluation of the accounting concept of profit as seen from an economic-theoretical point of view."[2] Similar trends can be recognized in the American literature. The works of Edgar O. Edwards and Philip W. Bell, *The Theory and Measurement of Business Income,*[3] and Norton M. Bedford, *Income Determination Theory: An Accounting Framework,*[4] may be cited as examples.

The basic concepts of modern income determination theory are hardly new; they have been discussed for many years in the general

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[1] Palle Hansen, *The Accounting Concept of Profit,* Amsterdam: North-Holland Publishing Co., 1962.

[2] Hansen, p. 5.

[3] Edgar O. Edwards and Philip W. Bell, *The Theory and Measurement of Business Income,* Berkeley: University of California Press, 1961.

[4] Norton M. Bedford, *Income Determination Theory: An Accounting Framework,* Reading: Addison-Wesley, 1965.

literature of micro-economics. The present value concept may serve as an illustration; thoroughly investigated by many economists from the viewpoint of investment analysis,[5] it has recently been integrated into modern income accounting theory.

Modern income determination theory has generally been based on a deterministic model and little effort has been made to integrate probability theory into the framework of accounting thought. This paper proposes some steps to overcome this limitation; it is principally concerned with the determination of the concept of subjective income along Bayesian lines and seeks to establish a clear distinction between subjective and realizable income.

DETERMINATION OF SUBJECTIVE INCOME

Modern accounting literature leaves little disagreement with the concept of three basic types of business income which should be distinguished: (1) subjective income, (2) realizable or market income, and (3) realized or transaction income.[6] Although strongly interrelated, these categories may be discussed separately. This section exclusively concerns itself with subjective income and its implications for the accounting theory of income determination.

The Modern Accounting Approach

Subjective income is related to the change in subjective value of specific goods and services over a definite period of time. In the case of unaltered expectations, this change in the subjective value is equal to the change in the discounted value of the expected net receipts (including appreciation) which the assets being considered will yield for the period under investigation. If the evaluations are made for the period between a current or prospective date t_i and a future date t_j $(i < j)$, the difference between the two subjective values is, *ceteris paribus,* equal to the interest accruing on the capitalized value of the assets at t_i during the period $(t_j - t_i)$.

To compute this capitalized value, three factors must be estimated: (1) the amount of the expected net receipts for each period (s_i), (2)

[5] Irvin Fisher, *The Nature of Capital and Income,* New York: Macmillan, 1906. Erik Lindahl, *Studies in the Theory of Money and Capital,* London: Allen & Unwin, 1939, pp. 74-111.

Friedrich A. and Vera Lutz, *The Theory of Investment of the Firm,* Princeton: Princeton University Press, 1951.

Erich Schneider, *Wirtschaftlichkeitsrechnung: Theorie der Investition,* Third Edition, Tübingen: Mohr, 1961.

[6] Edwards and Bell, pp. 31-131; Bedford, pp. 20-49.

the number of the periods within the entire planning horizon (n), and (3) the appropriate target rate of return (r).[7] On these bases, capitalized values can be determined, S_{ii} representing the subjective value of an asset or group of assets at t_i as viewed at t_i. Specifically, if p_0 represents the price of the resources to be paid at t_0, the capitalized value would be

$$S_{0-\,0-} = s_1(1+r)^{-1} + s_2(1+r)^{-2} + \ldots + s_n(1+r)^{-n} - p_0$$

or

$$S_{0-\,0+} = s_1(1+r)^{-1} + s_2(1+r)^{-2} + \ldots + s_n(1+r)^{-n}.$$

The difference between these two formulas is based on the fact that the capitalized value can be determined at a point in time just before or after t_0, viz. $t_0 - < t_0$ or $t_0 + > t_0$. This special point will not be considered any further in the following discussion.[8]

The concept of subjective income may be considered in various ways. One possibility is to distinguish between anticipated and actual subjective income. The problems and techniques of a possible graphic representation of the differences between these concepts will now be considered.

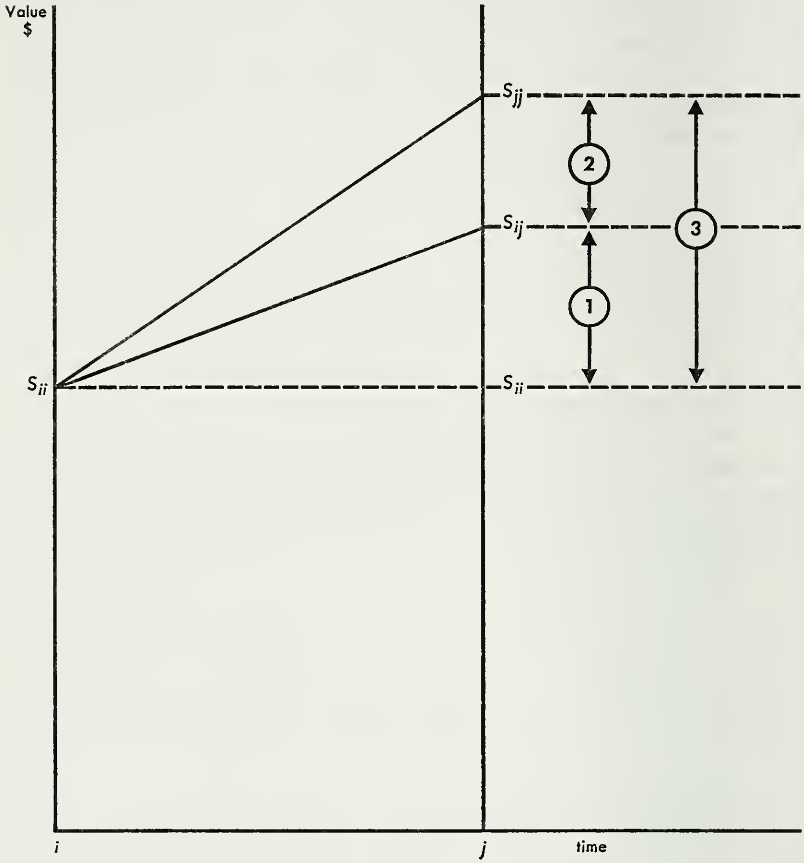
To keep the illustration simple, it is assumed that no revenues and expenses can be incurred between t_i and t_j. The actual intermediate inflows and outflows are treated as if they would earn a pro rata interest at the market rate until being recognized at t_j. At this point they would also be included in the net receipts and ultimately be discounted at the target rate.

The expected subjective income for the period (i,j) as viewed at the point in time t_i is given by $S_{ij} - S_{ii}$; this represents the expected difference in the subjective value of all anticipated net receipts to the point t_i and t_j if the target rate of return could be realized. In Exhibit 1 this difference is represented by 1.

Subjective income may be computed not only prospectively but also in retrospect. Contrary to anticipated or *ex ante* income, *ex post* income reflects the expected and the unexpected changes of the subjective value of the goods and services; "after-the-fact subjective income is equal to before-the-fact subjective income (expected) plus unexpected gains and losses."[9] This situation is shown in Exhibit 1. Viewed from the time t_j, the total subjective income of the period (i,j) is represented by $S_{jj} - S_{ii}$. This value, which has been graphically repre-

[7] Eldon S. Hendriksen, *Accounting Theory,* Homewood: Irvin, 1965, pp. 104-5.
[8] Schneider, pp. 15-21.
[9] Bedford, p. 25.

Exhibit 1. Subjective Income



① Expected subjective income
② Unexpected subjective income
③ Total subjective income

sented by ③, indicates the "after-the-fact subjective income" of the period. The unexpected subjective income of the period (i,j) is defined as $S_{jj} - S_{ij}$ and is shown by ②. Any actual difference is, *ceteris paribus,* due to the unequal subjective evaluation of the same resources at t_i and t_j.

This suggested neat distinction between expected and unexpected subjective income is based on a deterministic model which differs substantially from the practical income evaluation process. A refined

model can be developed along Bayesian lines. This approach will now be discussed.

A Refined Statistical Approach

Bayes' theorem is usually[10] formulated along the following lines:

If $H_1, H_2, \ldots, H_n$ are pairwise independent events whose union is the sample space S, whereby $P(H_i) > 0$ for $i = 1, 2, \ldots, n$, then the following equation is valid for any arbitrary event E:

$$P(E) = P(H_1 \cap E) + P(H_2 \cap E) + \ldots + P(H_n \cap E).$$

If this theorem is accepted and $P(E) \neq O$, then the following result holds for any H_i within the range of $i = 1, 2, \ldots, n$:

$$P(H_i \mid E) = \frac{P(H_i \cap E)}{P(H_1 \cap E) + P(H_2 \cap E) + \ldots + P(H_n \cap E)}.$$

This is known as Bayes' theorem.

$P(H_i \mid E)$ is the conditional probability that H_i happens, knowing that E occurred. $P(H_i \mid E)$ can, therefore, reasonably be called *a posteriori* probability; the term *a priori* probability is often used to designate $P(H_i)$.

Assuming that the events H_i and E are statistically independent, the following relationships exist among the probabilities noted above: $P(H_i \mid E) = P(H_i)$ and $P(E \mid H_i) = P(E)$. Therefore, it is also possible to state that $P(H_i)P(E) = P(H_iE)$ and $P(E)P(H_i) = P(EH_i)$, from which follows that $P(H_i) \cdot P(E \mid H_i) = P(EH_i) = P(H_i \mid E)P(E)$. These relationships are also shown in Table 1. Since

Table 1. Basic Probabilities

Hypothesis (1)	*a priori* probability (2)	Conditional probability (3)	Joint probability (4) = (2) (3)	*a posteriori* probability (5) = (4)/$P(E)$
H_1	$P(H_1)$	$P(E \mid H_1)$	$P(EH_1)$	$P(H_1 \mid E)$
H_2	$P(H_2)$	$P(E \mid H_2)$	$P(EH_2)$	$P(H_2 \mid E)$
H_3	$P(H_3)$	$P(E \mid H_3)$	$P(EH_3)$	$P(H_3 \mid E)$
S	$P(S) = 1.0$	$P(E \mid S)$	$P(E)$	$P(S \mid E)$

[10] Bernard Ostle, *Statistics in Research: Basic Concepts and Techniques for Research Workers,* Second Edition, Ames: Iowa State University Press, 1963, p. 32.
Frederick Mosteller, Robert E. Rourke, and George B. Thomas, Jr., *Probability with Statistical Applications,* Reading: Addison-Wesley, 1961, pp. 146-48.
Marek Fisz, *Wahrscheinlichkeitsrechnung und mathematische Statistik,* Third Edition, Berlin: Deutscher Verlag der Wissenschaften, 1965, pp. 23-24, 415-18.

$P(EH_i) = P(E)P(H_i) = P(E \cap H_i)$, this table represents a transformation of Bayes' theorem. It has been used extensively in modern business statistics[11] and serves as the basis for the following discussion.

It is assumed that the yearly budget of an investment trust indicates a net profit of \$100,000 and it is understood that this amount has been determined after careful analysis of all relevant intra-economic and extra-economic (such as social and political) factors. These specific factors are not discussed in this paper. One may contend, however, that modern business economists cannot be fully satisfied with any budgeting procedure as long as it is of a deterministic nature. One possibility to solve this problem is to refine the budgeting procedure by referring to the traditional probability theory even though the use of Bayes' theorem would seem to be more challenging.

The first solution assumes that the yearly net profit could range between \$80,000 and \$120,000, \$96,000 being the expected outcome. As shown in Table 2, the expected profit may be determined from the equation:

$$s = P(H_1)H_1 + P(H_2)H_2 + \ldots + P(H_n)H_n,$$

where $P(H_i)$ represents the probability of occurrence of hypothesis H_i to which a specific monetary value has previously been assigned.

[11] Robert Schlaifer, *Probability and Statistics for Business Decision: An Introduction to Managerial Economics Under Uncertainty,* New York: McGraw-Hill, 1959, pp. 330-39.

———, *Introduction to Statistics for Business Decisions,* New York: McGraw-Hill, 1961, pp. 169-86.

Harry V. Roberts, "The New Business Statistics," *The Journal of Business,* Vol. 33, No. 1, January 1960, pp. 21-30.

Jack Hirshleifer, "The Bayesian Approach to Statistical Decision — An Exposition," *The Journal of Business,* Vol. 34, No. 4, October 1961, pp. 471-89.

Frank M. Bass, "Marketing Research Expenditures: A Decision Model," *The Journal of Business,* Vol. 36, No. 1, January 1963, pp. 77-90.

Jack Corsiglia, "The Management Decision in Product Strategy and Pricing," *IEEE Transactions on Engineering Management,* Vol. EM-12, No. 2, June 1965, pp. 34-43.

Paul E. Green, "Bayesian Statistics and Product Decisions," *Business Horizons,* Vol. 5, No. 3, Fall 1962, pp. 101-9.

Harold Bierman, Jr., and Seymour Smidt, *The Capital Budgeting Decision: Economic Analysis and Financing of Investment Decisions,* Second Edition, New York: Macmillan, 1966, pp. 283-354.

Paul E. Green and Donald S. Tull, *Research for Marketing Decisions,* Englewood Cliffs: Prentice-Hall, 1966, pp. 55-87, 255-89, 465-94.

William Fellner, *Probability and Profit: A Study of Economic Behavior Along Bayesian Lines,* Homewood: Irwin, 1965.

Table 2. Determination of Expected Profits

Hypothesis		Probability	Expected net profit per year
H_i	$	$P(H_i)$	$
1	80,000	0.30	24,000
2	100,000	0.60	60,000
3	120,000	0.10	12,000
Total		1.00	96,000

Bayes' theorem provides for a refined analysis. Using the earlier example, it is assumed that the basic hypotheses H_i and the probabilities $P(H_i)$ remain unchanged; the latter represent the so-called *a priori* probabilities. These basic data will be complemented by additional studies. It is assumed that net profit can be determined semiannually on an *ex ante* and *ex post* basis. The additional information provides for detailed profit analyses following Bayesian techniques.

The semiannual net profits are denoted by E_j. It is assumed that these net profits are exclusively based on dividends and interests earned on the original investment and the newly accumulated funds; they are expected to fluctuate between $30,000 and $50,000, the most likely outcome being $37,000. (See Table 3.)

These additional data give rise to a reexamination of the annual budget which can now be prepared on the basis of *a posteriori* probabilities. The intermediate steps can easily be derived from Table 1. First, the conditional probabilities, $P(E_j \mid H_i)$, must be determined.

Table 3. Expected Profits

Annual profits				Semiannual profits (First six months)			
Hypothesis		Probability	Expected net profit	Hypothesis		Probability	Expected net profit
H_i	$	$P(H_i)$	$	E_j	$	$P(E_j)$	$
1	80,000	0.30	24,000	1	30,000	0.40	12,000
2	100,000	0.60	60,000	2	40,000	0.50	20,000
3	120,000	0.10	12,000	3	50,000	0.10	5,000
Total		1.00	96,000	Total		1.00	37,000

Table 4. Conditional Probabilities $P(E_j \mid H_i)$

Expected profits		1	2	3	Total
H_i	$ \ E_j $	30,000	40,000	50,000	
1	80,000	0.7	0.2	0.1	1.0
2	100,000	0.2	0.7	0.1	1.0
3	120,000	0.1	0.1	0.8	1.0
Total		1.0	1.0	1.0	...

These probability assignments prove to be of a very demanding nature. This is so because no definite relationships exist between the semiannual and annual profits. Although there might be a high probability that an annual profit of H_1 will result if a semiannual net profit of E_1 is expected to occur, there still is a chance that the same semiannual profit prognosis could have been made if the annual profit potential were not H_1 but really H_2 or H_3.

Table 4 indicates that the assumption that a semiannual net profit of $30,000 will lead to an annual net profit of $80,000 is only 70 per cent reliable; there is a 30 per cent chance that the annual net profit will reach $100,000 or even $120,000. Thus, the conditional probabilities were fixed accordingly at $P(E_1 \mid H_1) = 0.7$, $P(E_1 \mid H_2) = 0.2$ and $P(E_1 \mid H_3) = 0.1$. Similar probability assignments had to be made in respect to E_2 and E_3. (See Table 4.)

As indicated in Table 1, the next step is the determination of the joint probabilities, $P(H_iE_j)$. They can easily be computed by multiplying the appropriate values of Tables 3 and 4 since $P(H_iE_j) = P(H_i) \cdot P(E_j \mid H_i)$. (See Table 5.)

Table 5. Joint Probabilities $P(H_iE_j)$

H_i \ E_j	1	2	3	Total $P(H_i)$
1	0.21	0.06	0.03	0.30
2	0.12	0.42	0.06	0.60
3	0.01	0.01	0.08	0.10
Total $P(E_j)$	0.34	0.49	0.17	1.00

Table 6. A *posteriori* Probabilities $P(H_i \mid E_j)$

H_i \ E_j	1	2	3
1	0.62	0.12	0.18
2	0.35	0.86	0.35
3	0.03	0.02	0.47
Total	1.00	1.00	1.00

Table 5 shows all the data that are required to determine the *a posteriori* probabilities. They are obtained by dividing each of the joint probabilities by the appropriate value of $P(E_j)$. The results of these calculations, $P(H_i \mid E_j) = P(H_iE_j)/P(E_j)$, are given in Table 6.

The results of these tables may be summarized in a so-called decision tree as shown in Exhibit 2. From this information, the expected annual net profit can be determined; by retrograde computation it proves to be $96,000.

Although no difference is shown between the expected results based on the *a priori* probabilities (Table 2) and the *a posteriori* probabilities (Exhibit 2), the value of Bayes' theorem should not be underestimated. Actually, Exhibit 2 shows that the realization of E_1 would, *ceteris paribus,* very likely lead to a total annual profit of $88,200, whereas an *ex post* value of E_3 would most likely result in a total profit of $105,800.

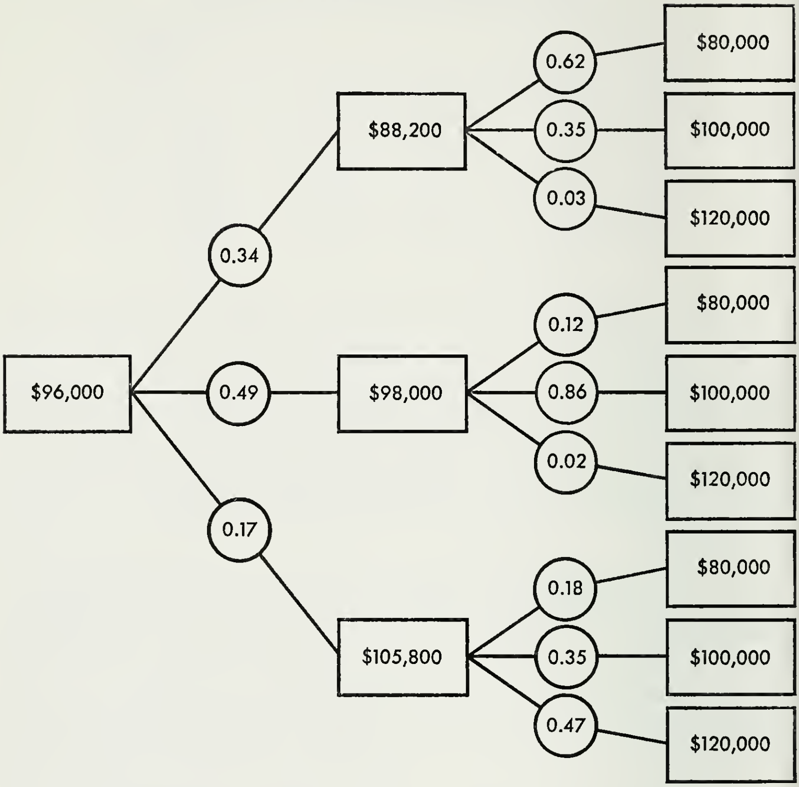
Similar calculations could be made for succeeding accounting periods, ranging up to planning horizon (t_n). The basic procedure would remain the same although the probability assignments might become much more difficult and involved.

Evidently, the expected net profits of each period (s_i) would finally be discounted at an appropriate target rate of return, leading to the determination of the capitalized values of the expected net income at selected points in time as viewed from t_0. As discussed in connection with the modern accounting approach, the values of S_{00} and S_{01} would be of special interest to business economists; a detailed analysis along these lines would ultimately lead to the *ex post* determination of the expected and unexpected subjective income of the period (0,1) as shown in Exhibit 1.

DETERMINATION OF THE REALIZABLE INCOME

In comparison to the results of the capitalization procedure described above, market valuations are usually presumed to be more ob-

Exhibit 2. Budgeting by Bayesian Techniques



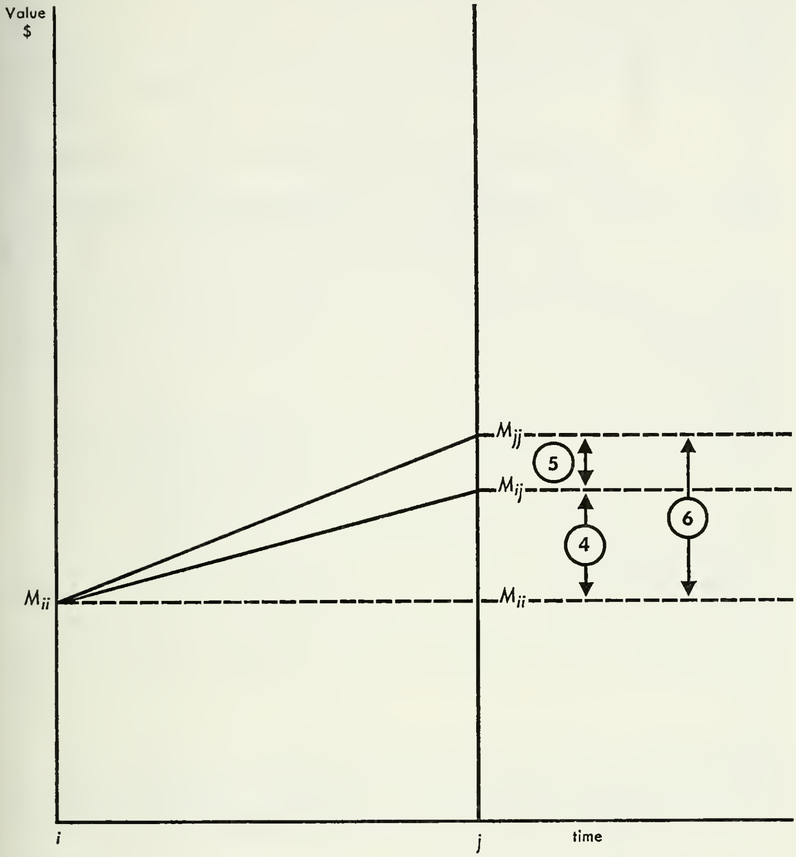
jectively determined. They depend upon the expectations held by a number of potential and/or actual buyers and sellers for specific goods and services, which means that the market value is, in a somewhat vague sense, "an average of these subjective values of a particular resource or resources."[12]

The market value (M) can be determined either *ex ante* or *ex post*. For the holder of a particular asset, the market value will normally be smaller than the corresponding capitalized subjective value; if it were not, the present owner of the asset would be better off by selling it on the market.[13]

In most cases, income determination is primarily based on market

[12] Bedford, p. 28.
[13] Hendriksen, pp. 107-8.

Exhibit 3. Realizable Income



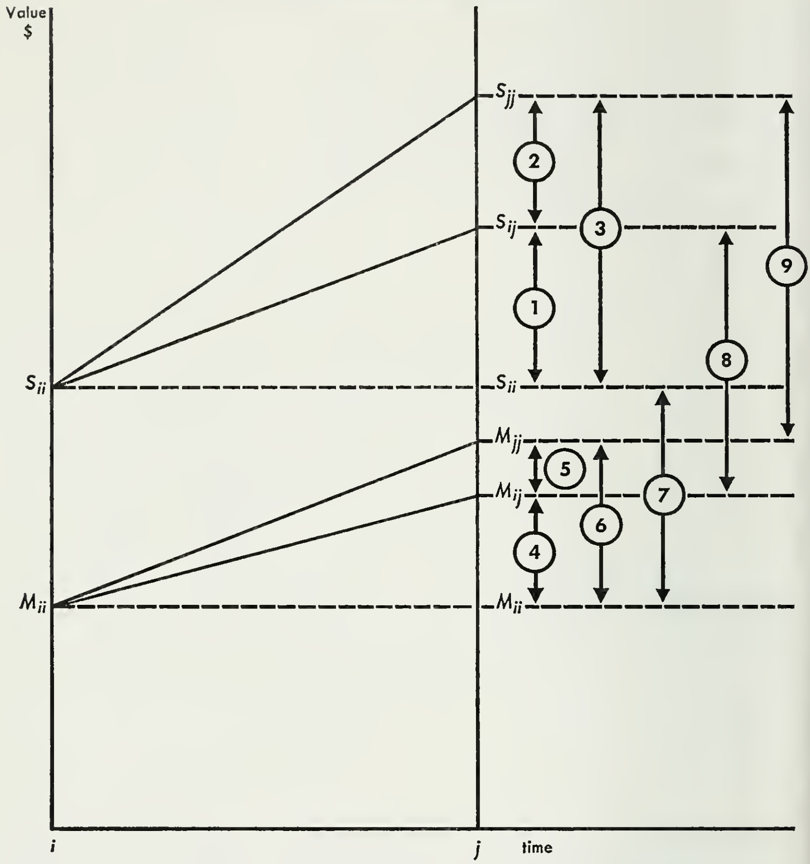
④ Expected realizable income
⑤ Unexpected realizable income
⑥ Total realizable income

values; this leads to the so-called market or realizable income concept.[14] The following discussion is only concerned with the graphical representation of the realizable income.

In Exhibit 3, M_{ii} represents the market value of an asset or group of assets at t_i as viewed at t_i. The expected realizable income of the period (i,j) as viewed at t_i is defined by $M_{ij} - M_{ii}$. This difference is graphically represented by ④.

[14] Edwards and Bell, pp. 44-59; Bedford, pp. 28-31.

Exhibit 4. Variance Analysis



① Expected subjective income for period (i,j)
② Unexpected subjective income for period (i,j)
③ Total subjective income for period (i,j)
④ Expected realizable income for period (i,j)
⑤ Unexpected realizable income for period (i,j)
⑥ Total realizable income for period (i,j)
⑦ Actual variance between subjective and market value at t_i
⑧ Expected variance between subjective and market value at t_j
⑨ Actual variance between subjective and market value at t_j

The total realizable income of the period (i,j) is represented by $M_{jj} - M_{ii}$ and designated by ⑥. This difference has also been called "after-the-fact realizable income."[15] It can be divided into two components, *viz.*, expected and unexpected realizable income. The latter is represented by $M_{jj} - M_{ij}$ and designated by ⑤.

RELATIONSHIP BETWEEN SUBJECTIVE AND REALIZABLE INCOME

Normally, the subjective and realizable incomes will not be identical. The basic variances can be determined as follows:

$S_{ii} - M_{ii}$ is the total variance between the subjective value and the market at the time t_i. This variance can be positive or negative; in Exhibit 4, ⑦ represents the excess of subjective value over market value.

$S_{ij} - M_{ij}$, or ⑧, represents the expected variance between subjective and market value as viewed at t_i, whereas $S_{jj} - M_{jj}$, or ⑨, represents the effective variance between subjective value and market value as experienced at t_j.

$(S_{ij} - M_{ij}) - (S_{ii} - M_{ii})$ indicates the expected change of the variance between subjective value and market value over the period (i,j).

These variances may be combined in various ways. Specifically, the expected subjective income of the period (i,j) can be computed as follows:

① = ④ + (⑧ − ⑦). The after-the-fact subjective income is composed as follows: ③ = ⑨ − ⑦ + ⑥. These relationships have been extensively discussed by Bedford.[16] His numerical examples might become more easily comprehensible on the basis of Exhibit 4.

In summary, one may conclude that modern income determination theory can be discussed in various ways — the newer mathematical and graphical approaches being especially useful in view of their conciseness. The shortcomings of such presentations are also quite obvious; the limited descriptive possibilities make the texts in most cases quite technical and as such not readable enough to many accountants. This fact will very likely increase the gap between theorists and practitioners but might well be necessary to foster a better understanding of the basic concepts of business economics.

[15] Bedford, p. 31.
[16] Bedford, pp. 28-31.

The Evolution of Financial Reporting in Japan

YUKIO FUJITA*

This article will discuss the evolution of financial reporting in Japan with special reference to the related legal background. The term financial reporting is used in this paper to indicate the system of external reporting used by Japanese corporations for the various interest groups. As the corporation has long been the most typical and important form of business organization in Japan, the scope of the study is limited to corporate financial reporting. The history of financial reporting in Japan begins approximately 1870. All points cannot be discussed in detail but this article will sketch rather broadly the evolution of financial reporting in Japan.

A BRIEF HISTORY OF FINANCIAL REPORTING IN JAPAN

Traditional Bookkeeping Systems

Before the establishment of modern commercial and industrial enterprises, Japan had already had nearly 200 years of experience with bookkeeping. The oldest Japanese accounting books still existing today are from 1615 and 1634.[1] It is believed that Japanese merchants initially kept only one book (*Daifukucho*), whose function was similar to that of the ledger in the contemporary single-entry bookkeeping. As the size

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[1] K. Nishikawa, "The Early History of Double-entry Bookkeeping in Japan" in Littleton and Yamey, *Studies in the History of Accounting*, Homewood: R. D. Irwin, 1956, p. 380.

of business proprietorships grew, additional bookkeeping records were added, such as the *Kaicho* (purchase book), the *Uricho* (sales book), and the *Kingindeiricho* (cash book).

Some of the larger businesses employed more complex systems of record keeping to serve their needs better. Of these, the *Izumo* and the *Nakaike* bookkeeping systems were both unique and elaborate.[2] The former was the bookkeeping system designed by the Tanabe family who operated more than twenty iron forges in Izumo Province. At one of their plants, more than thirty books were used and so-called inventories were prepared from these books semiannually. Each "inventory" contained details of cash, iron, rice, wages, and various expenditures. Three financial statements were prepared: a statement of assets and liabilities and two types of income statements.

The first type of income statement presented summaries of revenues, expenses, and the net operating result. The second type of income statement gave the same net result but was calculated by comparing opening and closing balances of assets and liabilities. Thus, net income was calculated by two different methods. Adjustments for prepaid and accrued expenses were also made. Although the Tanabe businessman called these two income statements "double-sided" accounts, the Izumo bookkeeping system was nothing more than a traditional Japanese bookkeeping system, a type of single-entry bookkeeping. These traditional bookkeeping systems were originally devised by each merchant and there was no uniformity among them. Financial statements based on these bookkeeping systems seem to have been used primarily for controlling their own businesses.

The Introduction of Double-Entry Bookkeeping into Japan

After the opening of Japan to foreign countries in 1854 based on the United States-Japanese Peace and Amity Treaty, modern book-

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[2] For the details of the *Izumo* and the *Nakaike* bookkeeping systems see the following literature:

Hirai, Yasutaro, "*Izumo*-choai no Seishitsu" (The Nature of the *Izumo* Bookkeeping), *The Kokumin-keizai Zasshi* (The Journal of Economics & Business Administration), September 1936.

Yamashita, Katsuji, "*Izumo* ni okeru Ryomen-kanjyo" (Double-sided Accounts in *Izumo* Bookkeeping), *Hikone Kosho Ronso* (Hikone Kosho Review), No. 30 special issue, December 1936.

Ogura, Eiichiro, *Goshu Nakaike Choai-no-ho* (The Bookkeeping System of Nakaike in Goshu [Siga Prefecture]), Kyoto, Japan: Minerva Book Store, 1962, 264 pp.

keeping systems were imported simultaneously into Japan from several countries. Not only American and British works, but also French and German, and even Russian books, were introduced. In addition, several Western accounting experts and teachers were invited to design modern accounting systems and to train Japanese accountants for industrial and commercial concerns established on Western models. Among them Vincent E. Braga (Portugal), Alexander Allan Shand (Great Britain) and William Goswell Whitney (United States) played the most important roles in the early development of double-entry bookkeeping.[3]

Opening of the National Banks

One of the most epoch-making events of this period was the establishment of national banks in Japan after the model of the national banking system in the United States. In 1872 the Japanese government engaged Alexander Allan Shand to compile a treatise on bookkeeping to be used by the new national banks and his work, entitled *Ginko-boki-seiho* (The Detailed Method of Bank Bookkeeping) was published by the Ministry of Finance in 1873. The introduction of this accounting system in the national banks is considered to have been the first step toward the modern accounting system for the corporation in Japan.[4]

In 1873 the Japanese government adopted for its new national banks the uniform accounting system designed by Alexander Allan Shand. The legal support for this system was contained in the National Bank Act (1872) and the attached regulations of the National Bank Act (1872). This required the national banks to (1) keep bookkeeping systems (Article 12), (2) prepare and submit the financial statements to the government and shareholders (Article 13), and (3) be examined by government officers from the Ministry of Finance (Article 17).[5] In 1877, the uniform financial statements of the national banks were designed by the Ministry of Finance based on an Appendix to the Regulation for National Bank Reporting. The financial statements based on the regulation consist of five statements. The two most important statements are the *Hanki-jissai-hokoku* (a semiannual balance sheet before profit appropriation) and the *Hanki-riekikinwariai-hokoku* (a semiannual combined statement of income and profit appropriation).[6]

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[3] Nishikawa, *op. cit.,* pp. 382-3.

[4] Ichiro Katano, "Nihon Zaimushohyo Seido no Tenkai to Kadai" (Development of Corporate Financial Reporting in Japan and Its Problems), *Kigyokaikei* (Accounting), February 1966, p. 11.

[5] *Ibid.,* pp. 11-12.

[6] *Ibid.,* pp. 20-23.

Until the enactment of the Commercial Code in 1890, the financial reporting system of the national banks had a great influence on the financial reporting practices of other commercial and industrial corporations.

Commercial Code

As a part of the modernization movement of the Japanese legal institutions, the Meiji government employed a German, Hermann Carl Friedrich Roesler, to compile a Japanese Commercial Code in 1881. Upon the completion of the draft in 1884, it was amended by the Law Investigation Committee, adopted by the Senate in 1890, and enacted as Law No. 23 in the same year. This Code is commonly known as the Old Commercial Code. The New Commercial Code became effective after considerable amendment as Law No. 48 in 1899. The Commercial Code required every company to prepare the following documents:

1. An inventory
2. A balance sheet
3. A business report
4. An income statement
5. Proposals pertaining to the reserve accounts and to the distribution of profit or interest.

The directors of the corporation shall submit these documents to the *Kansayaku* (Statutory Auditor) one week before the day set for an ordinary general meeting of shareholders (Article 190). The statutory auditor, who is elected at the general meeting of shareholders, is an organ of the company as well as the directors and is required to examine any documents which the directors propose to submit to a general meeting of shareholders. He must report his opinion at the general meeting (Article 183). Thus, the foundations of the legal requirements for financial reporting by Japanese corporations were established although the Commercial Code still has no clear prescriptions for preparing these financial statements. The Commercial Code lacks a detailed prescription for the valuation of assets except for the valuation of assets for inventory:

> A valuation shall be made of movable, immovables, claims and all other assets and entered in the inventory. Such valuation shall not exceed the value at the date of taking the inventory. (Article 26)[7]

[7] The Codes Translation Committee of the League of Nations Association of Japan, *The Commercial Code of Japan,* annotated, Vol. 1, Tokyo, Japan: The League of Nations Association of Japan, 1931, p. 40.

Working Rules for Financial Statements by the Ministry of Commerce and Industry

For more than thirty years Japan did not regulate the forms of financial statements until the Working Rules for Financial Statements by the Ministry of Commerce and Industry was published in 1934. Based on the Commercial Code, every Japanese corporation was asked to prepare an inventory, a balance sheet, and an income statement. The statements were not very helpful to readers to obtain useful information about a company because of the wide variety of forms used, incompleteness in reporting, and window dressing. Under these circumstances, the government was urged by many to take some steps to guide business to rational managerial and financial policies to overcome the effects of the nationwide depression beginning in 1929. The purpose of the Working Rules was to establish standards for financial statements by designing their form and classifying the accounts. Although the rules were not promulgated as law, they made a great contribution to the development of a uniform accounting system.

Tentative Standards for Financial Statements of Manufacturing Companies by the Planning Bureau

With the Manchurian Incident of 1931, its resignation from the League of Nations in 1933, the outbreak of the Sino-Japanese War in 1937, and the later Tripartite Alliance with Germany and Italy, Japan accelerated its pace of international military and political confrontation. At the same time Japan was becoming economically isolated. The Japanese government adopted a policy, therefore, to centralize its control of the economy. As a means of centralized economic control, an improvement in uniform accounting procedures was urged. In 1940 the Ministry of the Navy and the Ministry of the Army published pamphlets entitled "The Manual for Preparing Financial Statements in the Factories of Munition for Navy" and "Working Rules for Preparing Financial Statements in the Factory of Munitions for the Army."

A week after Japan became involved in World War II, "Tentative Standards for Balance Sheets of Manufacturing Companies," "Tentative Standards for Inventory of Manufacturing Companies," and "Tentative Standards for Income Statements of Manufacturing Companies" were published by the Uniform Financial Statements Council in *Kikakuin* (Planning Bureau), which was established in 1937 as a central government agent for planning and controlling of wartime economy. Whereas the Working Rules of the Ministry of Commerce and Industry were rather strict and theoretical, the Tentative Standards of the Plan-

ning Bureau placed the emphasis on the practicability of disclosure in financial statements and prescribed the minimum requirements which should be followed by a corporation as an element of the national economy. The government attempted to exert control over all manufacturing companies through the use of corporate financial statement information as the source for the basic data necessary for price policy and financial policy formulation from the viewpoint of the nation. As with the Working Rules published by the Ministry of Commerce and Industry, this Statement of Tentative Standards was not issued as a cabinet order as originally scheduled. These standards, therefore, could not place any legal restriction on the corporation. No one, however, can deny its educational effect on the movement toward the improvement and unification of financial reporting in Japan.

Until the termination of World War II, the initiative of the movement toward uniform financial reporting had always been taken by the Japanese government although the nature of the movement had been changed from time to time according to the national political and social environment. The Japanese experience may constitute a unique pattern of the development of a financial reporting system when compared to the experience of Western countries.

The New Development of Financial Reporting After World War II

The acceptance of the Potsdam Declaration outlining peace terms for the conclusion of World War II caused Japan to change in many respects and its national financial reporting system was no exception. The introduction and acceptance of a modern accounting theory and practice framework, including the initiation of system for the certification of public accountants, has accurately been described as the "Japanese accounting revolution."

Immediately after the conclusion of World War II, the Research and Statistics Division of the General Headquarters of the Supreme Commander for the Allied Powers (SCAP) requested the "Restricted" or "Designated" companies to submit their financial statements in relation to the dissolution of the *Zaibatsu*. *Zaibatsu* (money clique or plutocracy) is a term used to designate the large Japanese industrial groups originally formed by several families, such as Mitsui, Iwasaki (Mitsubishi), Yasuda, and Sumitomo, of the earlier Meiji period by succeeding governmentally encouraged enterprises. These industrial groups had developed very rapidly in the time of war. Especially during World War II, these family-controlled firms were major elements in the overall national potential. Therefore, the permanent and complete dis-

armament of Japan, which was one of the most basic ideas in the Potsdam Declaration, could not be achieved without the dissolution of the *Zaibatsu* system.

The financial statements submitted by these companies to the Research and Statistics Division were indeed deplorable and proved of little use to the authorities. The officials of the Research and Statistics Division thought it absolutely necessary to establish some rules and regulations concerning the preparation of financial statements. William G. Hessler of the Research and Statistics Division asked the late Professor Gen Murase to make the first draft of such regulations.

First, Professor Gen Murase translated into English two Japanese statements on Accounting. They are: (1) "Tentative Standards for Financial Statements of Manufacturing Companies" of the Planning Bureau (1941) and (2) "The Manuals for Costing in Manufacturing Companies" of the Planning Bureau (1942). Professor Murase, then, wrote the first draft by comparing these translated statements with American accounting principles. According to the late Professor Murase, in three weeks they prepared a pamphlet entitled, "Instruction for the Preparation of Financial Statements of Industrial and Trading Companies" based on his first draft.[8]

This instruction was the starting-point of the new movement for the establishment of accounting principles and its purposes were:

1. to assist Japanese companies in the preparation of type of clear, intelligible financial reports as required by SCAP authorities; and
2. to lay the foundation for the improvement and standardization of Japanese commercial and industrial accounting practices.

The opportunity to introduce American accounting concepts and procedures had arrived.

Establishment of Business Accounting Principles

To further improve the Japanese commercial and industrial accounting practices by spreading the spirit of the Instruction noted above, an Investigation Committee on Business Accounting Systems was established in 1948 in the organizational structure of the Economic Stabilization Board. The Committee included many noted men from the ranks of accounting professors, businessmen, and top-ranking governmental officials. The name of the Committee was later changed to

[8] Gen Murase, "Nichi, Ei, Bei Sangoku ni okeru Kaikeigensoku Seitei no Yurai" (A Brief History of the Establishment of Accounting Principles in Japan, England, and the United States), *Kigyokaikei* (Accounting), January 1954, p. 112.

the Business Accounting Standards Committee and still later to its present name, the Business Accounting Deliberation Council. The Committee released, as an interim report, two pamphlets entitled "A Statement of Business Accounting Principles" and "Working Rules for Preparing Financial Statements." This committee was a consultative body to the Ministry of Finance.

The economic background of this statement of accounting principles is well understood by referring to the Securities and Exchange Act and the Certified Public Accountant Law. The first step to dissolve the *Zaibatsu* system was to freeze the assets of these closely held companies. Approximately 7.8 billion yen ($21.7 million) worth of securities was transferred from the *Zaibatsu* to the Japanese government. Since the real effect of the dissolution of the *Zaibatsu* hinged on a successful general distribution of these transferred securities to the citizens, it was urgent to reconstruct a sound and democratic securities market for the public. To perform the important disposal transaction, a Securities and Exchange Act was enacted in 1948. The purpose of the Act was to permit and facilitate the fair issuance and transfer procedures as well as other transactions in securities and to provide for the orderly circulation for securities in order to make possible a rational administration of the national economy in addition to protecting the Japanese investors. The importance of an informed shareholder class for the sound development of the national economy was first recognized by this Act.

Old Article 193 of the Securities and Exchange Act suggested the possibility of an audit of financial statements by the public accountants. This Article allowed two choices for the public accountants as auditors: registered public accountants or certified public accountants. Following the suggestions of Mr. Blentringer and Mr. Oliver in GHQ, the Investigation Committee on Business Accounting Systems decided to establish a completely new CPA system. In July, 1948, a Certified Public Accountant Law was enacted. A Statement of Business Accounting Principles notes, as the foreword states, standards which CPA's must obey when they audit financial statements based on the Securities and Exchange Act and the Certified Public Accountant Law.

The movement for the improvement and unification of the Japanese financial reporting system after World War II thus began based on the Securities and Exchange Act, the Certified Public Accountant Law, and a Statement of Business Accounting Principles, including Working Rules for Preparing Financial Statements. There was another current of movement based on the national Commercial Code.

LEGAL BACKGROUND OF FINANCIAL REPORTING

Commercial Code and the Basic Idea Behind It

The most basic statutory law governing the activities of the Japanese Corporation is the Commercial Code because a Japanese corporation is considered to be an association based on the Commercial Code for the purpose of engaging in commercial transactions as a business.

When the Commercial Code was amended in 1938, a law concerning the operation of the amendments to the Commercial Code was enacted. Concerning the preparation of the financial statements, Article 49 of the Law states as follows:

> The manner in which an inventory, a balance sheet, and a profit and loss account (an income statement) of a *Kabushiki-kaisha* (corporation) are to be prepared and any other forms shall be prescribed by Ordinance.[9]

As mentioned in the previous section, the Commercial Code had no detailed prescription on how to prepare financial statements. It could, therefore, not have any real effect on financial reporting. Unfortunately, no ordinance was enacted until 1963.

In the course of its successive amendments, the Code, which was of a more German than French nature, after World War II reflected a considerable adaptation from Anglo-American Law. As far as the prescriptions concerning accounting requirements of Japanese corporations, however, there had been no great change until the most recent amendment in 1963.

From the first Commercial Code in 1890, its emphasis has continuously been placed on the inventory which was required to be submitted to the general meeting of shareholders. This accounting system specified in the Commercial Code might be described as an inventory method or inventory basis. The basic idea of the inventory method is, first, to prepare an inventory of all assets and liabilities possessed by the corporation as of the end of the accounting period and then to prepare a balance sheet based on the inventory. According to this method, the balance sheet is not prepared from the accounting books kept based on systematic bookkeeping procedures, but is based upon the inventory which is made as of the end of the accounting period after taking physical inventory. According to Article 34-1, an inventory shall list movables, immovables, claims and all other assets, together with a valuation. The valuation is not to exceed the value at the time of

[9] Sumio Fukuda (ed.), *The New Commercial Code of Japan, amended in 1938,* Tokyo, Japan: Tokyo News Service, Ltd., 1942, p. 371.

preparation of the inventory. In addition to this specific rule, the following points indicate that the Commercial Code is based on the inventory method:

1. The Commercial Code does not allow deferred charges to be listed on the balance sheet.
2. The Commercial Code does not allow intangible assets without legal existence, such as goodwill, to be included on the balance sheet.
3. The Commercial Code neglects some kinds of accounting liabilities, such as allowances.
4. Neither accrued expenses nor deferred incomes are allowed to be listed.[10]

The idea of the inventory method of accounting has long been supported by members of the legal profession because they believe the main purpose of the Commercial Code to be the protection of creditors rather than shareholders and that this purpose is achieved by the use of this inventory method. In other words, the Commercial Code has placed greater emphasis on the net worth (which is determined by reference to the realizable value of assets), than on precise income determination as a measure of business successfulness.

Usually management, shareholders, and creditors are considered the main interest groups of the Japanese corporation. The separation of the first two groups had not been apparent until the dissolution of the *Zaibatsu* system after World War II. Therefore, the basic purpose of the Commercial Code, to protect the creditors, had been generally accepted for a long time. The democratization of the Japanese securities market after World War II rearranged the relationships among the interest groups of the corporation. The new relationships stressed the separation of ownership from management and the consideration of both shareholders and creditors as investors or claim holders.

Business Accounting Principles

A Statement of Business Accounting Principles is one of the three important foundations supporting the post World War II movement for the improvement and unification of the Japanese financial reporting system.

The purpose of this important statement is noted in its foreword,

[10] Kiyoshi Kurosawa, "Syoho Kaisei to Kigyokaikeigensoku" (Revision of the Commercial Code and the Business Accounting Principles) in *Syoho Kaisei ni tomonau Syomondai* (Some Problems on the Revision of the Commercial Code), Tokyo, Japan: Ikkyo Shuppan, 1962, pp. 45-46.

"On the Establishment of A Statement of Business Accounting Principles," to be:

> Since business accounting systems in Japan, as compared with those in the Western countries, have much room for improvement and lack uniformity, it is presently difficult to understand financial conditions and results of business activities of business enterprises. In order to realize the sound development of business enterprises in our country and to promote the benefits of the whole society, any difficulty should be removed as quickly as possible.
>
> Further, for the rational solution of the current problems such as the induction of foreign capital, rationalization of business enterprises, justification of taxation, democratization of investment in securities, and proper industrial financing, which are essential to the reconstruction of Japanese economy, the improvement and unification of the business accounting system are urgent problems to be undertaken.
>
> Therefore, Business Accounting Principles are to be established aiming at the establishment and maintenance of the standards of business accounting, and consequently offering a scientific basis for the democratic and sound development of the national economy of Japan.

In this foreword the educational role of accounting principles is emphasized. The foreword describes the nature of accounting principles in the following terms:

> Business Accounting Principles are the summaries of those generally accepted as fair and proper among accounting conventions developed in practices of business accounting, and they are standards which should be observed when all business enterprises practice accounting even though they are not forced to do so by law or ordinance.
>
> Business Accounting Principles are the standards which Certified Public Accountants should observe when they audit financial statements based on the Certified Public Accountant Law and the Securities and Exchange Act.
>
> Business Accounting Principles should be respected in case that laws and ordinances affecting business accounting, such as the Commercial Code, Tax Laws, and Price Control Ordinance, be established, amended, or abolished in the future.

Business Accounting Principles are considered to be of three types: (1) General Principles, (2) Income Statement Principles, and (3) Balance Sheet Principles. This composition is very similar to "A Statement of Accounting Principles (1938)" prepared by the American's Sanders, Hatfield, and Moore. The identification of Business Accounting Principles in Japan is a result of the movement toward the improvement and unification of financial statements as outlined in the GHQ Instruction of 1947. It is, therefore, apparent that the Business Accounting Principles of Japan were modeled on some American accounting principles. Two approaches were considered: (1) the approach of Sand-

ers, Hatfield, and Moore, and (2) the approach of the American Accounting Association in their statement of 1941. The accounting principles as listed by Sanders, Hatfield, and Moore are by a formal approach whereas the principles listed by the American Accounting Association are characterized as substantial approach. One might ask why the Japanese selected the accounting principles of Sanders, Hatfield, and Moore as the model for their Business Accounting Principles? Although the drafters of the Business Accounting Principles admitted theoretical merits of the substantial approach, they felt compelled to place the primary emphasis on the practical and educational merits of the formal approach considering the social and economic situation existing immediately after World War II.[11] Thus, the Japanese Business Accounting Principles were modeled after the approach of Sanders, Hatfield, and Moore.

The following seven principles are listed as general principles:

1. the principle of the true report
2. the principle of regular bookkeeping procedures
3. the principle of distinction between capital surplus and earned surplus
4. the principle of fair disclosure
5. the principle of consistency
6. the principle of conservatism
7. the principle of unity.

In a sense, six of these principles (2-7) can be considered to support the first principle, the true report. From this point of view, the general principles, which are common or basic principles governing the principles for the income statement, balance sheet, and working rules, are designed as principles of reporting rather than principles of accounting.[12]

Income statement principles are noted in the following form:

1. the nature of income statement
2. the grouping of items in the income statement
3. profit from operations
4. non-operating profits and losses

[11] The Japanese Accounting Association, "Kigyokaikeigensoku no Toitsu o Chushin toshite" (Symposium on Unification of Business Accounting Principles), *Kaikei* (Accounting), January 1950, pp. 100-101.

[12] Iwao Iwata, "Kigyokaikei no Ippangensoku ni tsuite" (On General Principles of Business Accounting), *Kigyokaikei* (Accounting), September 1949. Professor Toshio Iino presents a unique interpretation on "the principle of the true report." See Toshio Iino, "Kaikeikoi to Kaikeigensoku" (Accounting Actions and Accounting Principles), *Kigyokaikei* (Accounting), April 1952.

5. net profit for the period
6. earned surplus
7. the earned surplus statement
8. the surplus appropriation statement.[13]

The contents of these principles are in turn summarized into four main principles, namely:

1. the principle of accrual basis
2. the principle of realization
3. the principle of gross amount
4. the principle of matching cost with revenue.

In addition, the idea of the current operating basis is introduced into the Income Statement Principles. One of the most urgent tasks of the movement for the improvement of the old Japanese accounting system represented by the Commercial Code was the introduction of the new concepts of capital surplus and earned surplus. For this purpose, the current operating concept of the income statement was used.

In the section of Balance Sheet Principles, the following five principles are listed:

1. the nature of the balance sheet
2. the arrangement of the balance sheet
3. the arrangement of items in the balance sheet
4. the classification of balance sheet items
5. the valuation of assets in the balance sheet.

One of the most basic features of the Balance Sheet Principles is the adoption of the cost basis for asset valuation as a general rule.

The Business Accounting Principles were not necessarily developed from general practices over a period of time, but largely resulted from the transplanting of American accounting principles, especially those prepared by Sanders, Hatfield, and Moore. The basic idea of them differs from that of the Commercial Code which was developed under the influence of German Law. Therefore, continuous effort to refine these accounting principles themselves had to be made on the one hand and another effort to reconcile the two different types of regulations had to be inaugurated on the other hand to allow for the development of the national financial reporting system.

[13] Since all appropriation of profit should be approved at the general meeting of shareholders in Japan (Commercial Code, Article 283), the surplus appropriation statement is prepared.

Reconciliation of the Commercial Code and the Business Accounting Principles

The Business Accounting Deliberation Council of the Ministry of Finance (formerly named the Investigation Committee on the Business Accounting Systems) released "Opinions on Reconciliation of Commercial Code and Business Accounting Principles" in 1951. As the foreword states, the Business Accounting Principles should be respected in case that laws affecting business accounting such as the Commercial Code be amended. These opinions were published to clarify the differences between the Commercial Code and Business Accounting Principles and to show a direction of future amendment of the Commercial Code from the viewpoint of the Business Accounting Principles. Therefore, these opinions can be regarded as a request from the Business Accounting Principles side to the Commercial Code.

The published opinions discuss fourteen controversial problems. They are: (1) accounting books, (2) balance sheets and income statements, (3) inventory and value for the closing balance sheet, (4) fiscal year and interim distribution of dividend, (5) statutory examination and audit by a CPA based on the Securities and Exchange Act, (6) preparation of financial documents, (7) approval of financial documents, (8) evaluation of assets, (9) organization expense, (10) deferred charge, (11) treasury stock, (12) capital surplus, (13) extraordinary loss, and (14) schedules relating financial documents.

Article 32 of the Commercial Code asks every trader to keep books (journals), but they need not necessarily be identical accounting books. Opinion No. 1 proposes to correct terms and to prescribe accounting books based on regular bookkeeping procedures. Article 33 is concerned with the inventory and the balance sheet and asks every company to prepare a general inventory of movables, immovables, claims and obligations and all other assets, as well as a balance sheet of each accounting period. The accounting nature of the opening balance sheet and that of the closing balance sheet are considerably different. The former is based on the opening inventory, but the latter is usually prepared from the accounting records together with an income statement. Therefore, it is rather difficult to prepare the closing balance sheet from the inventory without destroying its relation to accounting books. Opinion No. 2 proposes the following rule:

> The businessman shall prepare a (closing) balance sheet and income statement based on correct accounting books once a year at a certain date. In case of a corporation, these financial statements as mentioned above shall be prepared at the end of each fiscal year.

Concerning the separation of inventory and closing balance sheet,

Opinion No. 3 proposes the separation of two principles of asset valuation for the inventory and the balance sheet. As an extention of Opinion No. 2, Opinion No. 6 proposes the elimination of the inventory from documents which are required to be submitted by the directors at the general meeting of the shareholders. Opinion No. 8, which is developed from Opinion No. 3, proposes two different principles of asset valuation for fixed assets and current assets. The cost basis is suggested for fixed assets. For current assets, three principles are suggested: (1) use of the cost basis or cost or market, whichever is lower basis for inventory, (2) use of market value for marketable securities held for short-term investment purposes, and (3) use of the cost basis for other current assets.

Opinions No. 9 and No. 10 are concerned with an elaboration of the concept of deferred charge. Opinion No. 9 suggests the inclusion of those expenses necessary to start an enterprise in the category of organization expenses. The Commercial Code recognized only the following four items as deferred charge: (1) organization expenses, (2) expenses for issuance of new shares, (3) unamortized bond discount, and (4) interest during construction. Opinion No. 10 proposes the treatment of (1) expenses for issuance of debenture, (2) development expenses, and (3) experimental and research expenses as deferred charges.

Opinion No. 12 suggests a broadening of the concept of capital surplus as prescribed in the Commercial Code, Article 288-2. According to this article, the Commercial Code requires the following be set aside as the capital surplus: (1) paid-in capital from the issuance of stock in excess of par value, (2) paid-in capital from the issuance of stock in excess of stated value, (3) net amount resulting from a revaluation of assets, (4) paid-in capital from reduction in value assigned to outstanding stock, and (5) paid-in surplus from amalgamation. Opinion No. 12 suggests the clarification of these concepts and the addition of the concept of other capital surplus from sale of treasury stock in excess of cost and contributions by governmental authority or other party.

Following these opinions, the Business Accounting Deliberation Council undertook publication in 1957 of a new series of opinions on reconciliation of a Statement of Business Accounting Principles and related regulations. Since 1957, the Council had released three opinions at the time of the latest amendment of the Commercial Code. The titles of these releases are:

Series of Opinion No. 1, "On Composition of Financial Statements"
Series of Opinion No. 2, "On Form of Financial Statements"
Series of Opinion No. 3, "On Depreciation of Tangible Fixed Assets"

Although Series of Opinion No. 4, "On Evaluation of Inventory," and No. 5, "On Deferred Charges" were released after the latest amendment of the Commercial Code in 1962, the basic ideas of these opinions were adopted in the process of amendment of the Commercial Code.

New Regulations for Corporate Balance Sheets and Income Statements

Despite several amendments to the Commercial Code since the end of World War II, there was still much room for improvement. The Legal Institution Deliberation Council's Commercial Code Section, which was attached to the Ministry of Justice, started discussion of regulations for corporate accounting in 1958. The main purpose of the discussion was to reconcile the Commercial Code, the Business Accounting Principles, and the Regulation of Financial Statements based on the Securities and Exchange Act and, at the same time, to harmonize accounting theory and practices. After four years deliberation by lawyers, accountants, and government officers, the old Commercial Code was considerably amended in 1962 and a New Commercial Code was enacted in 1963 by adopting basic ideas of the Business Accounting Principles. In relation to the amendment of the Commercial Code, the Ministry of Justice published the "Regulations for Corporate Balance Sheets and Income Statements" in 1963.

As mentioned in the previous section, Article 49 of the Law Concerning the Operation of the Amendments to the Commercial Code stated that the manner of preparing financial statements and their forms should be prescribed by law. The new regulation was established after twenty-five years based on Article 49.

The Regulation for Corporate Balance Sheets and Income Statements contains four chapters:

1. General Principles
2. Balance Sheet
3. Income Statement
4. Other Principles.

The new regulations apply to balance sheets and income statements which are prescribed by Article 281 of the Commercial Code (Article 1). Article 283 of the Commercial Code requires directors to submit these financial statements to each ordinary general meeting of share-

holders for approval. Therefore, balance sheets and income statements which are submitted to the general meeting must be prepared based on the Regulations.

Whereas a Statement of Business Accounting Principles refers to seven general principles, this later regulation prescribes only one general principle (in Article 2), i.e., balance sheets and income statements should be prepared in such a way as to furnish accurate judgment on the condition of assets and income of corporations. This general principle is generally interpreted as the principle of truthfulness and/or the principle of fair disclosure.

Concerning the balance sheet, Article 4 reads as follows:

> Balance sheets should have an assets section, a liabilities section, and a net worth section with a total amount of each section.

The assets section should be subdivided into current assets, fixed assets, and deferred charges (Article 5) and the liabilities section should be subdivided into current liabilities, fixed liabilities, and allowances (Article 25). Each subsection of assets and liabilities should be further subdivided as necessary with descriptive captions. There is no prescription, however, for the arrangement of these sections or the form of the statement, so Japanese corporations can select either a current arrangement or a fixed arrangement and either the report form or the account form.

The Business Accounting Principles and the Regulations for Financial Statements by the Securities and Exchange Commission in Japan suggest the division of the net worth section into capital stock, capital surplus, and earned surplus, but the new Regulations by the Ministry of Justice did not adopt this type of classification. According to Article 34, the net worth section should be divided into capital stock, legal reserve, and other rather than the classification of surplus according to source.

The Regulations stressed the importance of dividing net worth into (1) capital and its equivalent (non-disposable for dividends) and (2) others (legally disposable for dividends). Article 34 seems to have a close relationship to Article 290 of the Commercial Code. Article 290 prescribes the amount available for dividends in the following formula:[14]

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[14] Toshio Iino, "Kaisei Kaikeikitei no Kihonrinen to sono Mondaiten" (Basic Ideas of Revised Accounting Regulation and Their Problems) in *Shoho Kaisei ni tomonau Syomondai* (Some Problems on the Revision of the Commercial Code), Tokyo, Japan: Ikkyo Shuppan, 1962, p. 70.

$$\begin{aligned}\text{disposable profits} = {} & (\text{assets} - \text{liabilities}) - \text{capital stock} \\ & - \text{legal capital surplus} \\ & - \text{legal earned surplus (including the} \\ & \quad \text{amount required to set aside for} \\ & \quad \text{the current year)}\end{aligned}$$

In this formula, legal capital surplus and legal earned surplus are both deducted to calculate disposable profits. These two amounts must be reserved as a cushion to protect creditors. In this sense, legal capital surplus and legal earned surplus are regarded as homogeneous.

This basic idea of the Commercial Code is also reflected in the income statement requirement of the Regulations. Article 37 reads as follows:

> The income statement should include a regular income section and a special income section, and the regular income section should be subdivided into an operating income section and a non-operating income section.

The income statement prescribed here is similar to the combined statement of income and retained earnings of American usage. Since the Japanese Commercial Code does not contain a Surplus Statement in its listing of financial statements, all transactions affecting disposable profits should be summarized in the income statement even though they are not related to current operations. Otherwise, the income statement might be an incomplete report to the stockholders.

Although all basic ideas of the Business Accounting Principles were not adopted in the Commercial Code or the Regulations, one cannot deny the fact that the differences between them was narrowed. Concerning the nature of the Regulations, there was no unanimous opinion. Most Japanese lawyers might consider the Regulations by the Ministry of Justice as compulsory prescriptions which should be observed by all corporations. Some accountants, however, might consider the Regulation as instructive prescription which is not applicable or enforceable for all corporations. In practice, however, nearly all Japanese corporations have been preparing their balance sheets and income statements since 1963 as prescribed by the Regulations.

JAPANESE FINANCIAL STATEMENTS AND THEIR SOCIAL FUNCTIONS

Types of Financial Statements

Financial reporting by corporations is considered to be a social responsibility as the corporation assumes multidimensional responsibilities in our modern industrial society. This widespread and penetrating social responsibility causes financial reporting practices to consider the

need for common rules. The movement for the improvement and unification of financial statements is linked to the establishment of such rules. Immediately after World War II, attempts to establish common rules resulted in the Business Accounting Principles. They contributed greatly to the improvement of Japanese financial reporting, but the principles themselves did not have legal force. It was soon considered necessary, however, to incorporate their basic ideas in the law. As mentioned earlier, there are two main laws governing Japanese corporate financial reporting — the Securities and Exchange Act and the Commercial Code.

A Securities and Exchange Act was enacted in Japan in 1948 for the purpose of requiring the fair issuance transfer and transactions in securities and to facilitate the securities market to promote the better administration of the national economy and the protection of the public investors. To better implement this act, the Securities and Exchange Commission established the Regulations for Financial Statements in 1950 by adopting the basic ideas of the Business Accounting Principles. The wording, form, and preparation method of financial statements were all prescribed in these Regulations. The financial statements and schedules prescribed by the Regulations by the Securities and Exchange Commission are as follows:

1. a balance sheet
2. an income statement
3. a surplus statement
4. a surplus appropriation statement (or a loss appropriation statement)
5. a schedule supporting financial statements.

The Regulations apply to those Japanese corporations which offer shares of stock or debentures with a value of more than 50 million yen. Although the number of corporations to which the Regulations are applied is nearly three thousand (approximately one per cent of total number of corporations in Japan), the stock of these corporations is publicly offered and these corporations do play very important roles in the Japanese industrial society. In addition to the Regulations, the forms of financial statements for those corporations engaging in special business are prescribed by special regulations such as Financial Statement Forms for Banks, Regulations for Electric Power Corporation Accounting, Regulations for Gas Corporation Accounting, Regulations for Local Railroad Corporation Accounting, and Regulations for Transportation Corporation Accounting.

According to the Commercial Code, the financial statements consist of the following statements or proposals.

1. an inventory
2. a balance sheet
3. a business report
4. an income statement
5. proposals pertaining to the reserve accounts and to the distribution of profit or interest.

Of these five, an inventory statement was excluded by the latest amendment to the law in 1963 from the financial statements required to be submitted to the general meeting of shareholders. The Regulations by the Ministry of Justice, which prescribes the forms of balance sheets and income statements, are applied to all Japanese corporations regardless of size and type of business. The number of corporations to which the Regulations apply is approximately 300,000. Obviously, the impact of these Regulations is very great.

All legally required financial statements are required either by the Securities and Exchange Act or the Commercial Code, or other related legislation. The social demand for adequate financial reporting is not necessarily satisfied by these legally required statements alone. The banks and other financial institutes, for example, need more information. Although not legally required, the cash flow statement is one of the principal financial statements.

Financial Statements and Interest Groups of Japanese Corporation

The modern corporation is a complex of many groups of people and capital and is organized to perform certain productive functions for profit. Shareholders can obtain the financial statements required by the Commercial Code at the general meeting of shareholders or they may receive them by mail after the general meeting in the form of a semiannual report. After obtaining the shareholders' approval of the financial statements at the general meeting, the balance sheet is usually given public notice in Japanese daily papers. Even those who are not shareholders can be informed by this balance sheet.[15] The Japanese Commercial Code requires that these financial statements be examined by statutory auditors before they are submitted at the general meeting of shareholders. In the present situation, however, one cannot expect too much of the statutory auditors.

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[15] An example of such financial statements is shown in the Appendix. These financial statements are prepared based on the Regulations for corporate balance sheets and income statements by the Ministry of Justice.

Thus, another type of examination of Japanese financial statements is needed. The Securities and Exchange Act requires the submission by corporations publicly offering their shares of stock or debenture with a value of more than 50 million yen of a *Yukashoken Todokeidesho* (registration statement), a *Mokuromisho* (a prospectus), and a *Yukashoken Hokokusho* (periodic report). The registration statement should include: (1) general information, (2) history, major lines of business, and major facilities, (3) information on current operations, (4) financial information, and (5) information on the new issues.

The periodic reports (annual or semiannual) should disclose: (1) general information, (2) major lines of business and major facilities, (3) information on current operations, and (4) financial information. In both statements, the financial information should include: (1) a balance sheet, (2) an income statement, (3) a surplus statement, (4) a surplus appropriation statement, and (5) schedules showing the details of major items on the balance sheet and income statement. The Japanese Securities and Exchange Act requires that this financial information be accompanied with an audit report prepared by a certified public accountant independent of the registrant (Article 93-2).

The copies of the registration statement and the periodic reports are kept for public use at the Ministry of Finance, Stock Exchanges, and home office and the main branches of the registrant. At this present time, the number of users does not seem to be great. One cannot overlook, however, the fact that this registration system based on the Securities and Exchange Act eliminates some of the weakness of the financial reporting system based on the Commercial Code.

One of the most active user groups of the financial reports of Japanese corporation is the creditor group, especially banks. The submission of financial statements to creditors is not required by Japanese law, but the corporation cannot receive loans from banks without the submission of financial statements. In Japan, approximately 45 per cent of the industrial capital funds is supplied by banks and nearly 30 per cent of the corporate stocks listed on Japanese stock exchanges are held by the financial institutions. These users usually request the corporations to submit more detailed financial data including cash flow statements. Each bank has its own financial analysis specialists to review financial statements from their own institutional viewpoint. One of the most outstanding characteristics related to financial reporting in Japan is that banks have no close relationship with CPA's. In most cases they make their own investigation of the financial condition and earning power of a prospective borrower and do not consult audit reports.

In addition to balance sheets and income statements, Japanese bankers attach considerable importance to cash flow statements. A survey on the use of cash flow statements in Japan indicates that they are primarily used by management and banks.[16]

Most large Japanese corporations are required to submit their financial statements to the Ministry of Finance under the provision of the Securities and Exchange Act. Banking and insurance corporations are under the direct control of Ministry of Finance. Their financial statements are examined by government officers. When the Japanese national banks began in 1872, they were required to be audited by the government officers. This requirement is still in force.

The Corporation Income Tax Law requires corporations to submit an inventory, a balance sheet, an income statement, and necessary supporting schedules showing the calculation of taxable income and the amount of tax to be paid with the tax return (Article 18-2). The requirement of the Corporation Income Tax Law for the calculation of taxable income does not necessarily coincide with the Business Accounting Principles. Therefore, many adjustments are needed in the process of the calculation of enterprise taxable income, but the starting point for adjustment is the net profit on the income statement as approved at the general meeting of shareholders. In this way, the financial statements provide the foundation for the tax assessment.

Audit of Financial Statements

Auditing is said to be an integral part of the financial reporting process.[17] This means that financial reporting is not complete without auditing. It is the last step in the Japanese financial reporting process to determine whether or not financial statements are prepared as required. This auditing function is usually performed in Japan by professional accountants. Prior to 1951 (when the legal audit was first required by the Securities and Exchange Act) auditing by professional accountants had not been popular in Japan. Some professional accountants (called registered public accountants) had been engaged in non-legal auditing since 1927, but their main business was limited to such jobs as tax consulting, bookkeeping and preparation of financial statements, clerical work related to the establishment of the company, preparation of forms for governmental agencies primarily for small or

[16] Kyojiro Someya, "The Use of Fund Statements in Japan," *The Accounting Review*, October 1964, pp. 983-89.

[17] John L. Carey, *The CPA Plans for the Future*, New York: AICPA, 1965, p. 186.

medium size businesses as large concerns, including *Zaibatsu,* had able accounting staffs of their own.

Based on the Japanese Commercial Code, the statutory auditor is required to examine financial statements and to report his opinion thereon. Unlike the system in the United Kingdom, however, there is no legal requirement that the statutory auditor be a professional accountant or auditor. Of course, there are some unique companies which do elect CPA's as statutory auditors. In most cases, the statutory auditor does not have an adequate, active auditing staff and is not independent of the company being audited. Therefore, the statutory Japanese auditor does not seem to be in a position to conduct a fair and strict audit of financial statement data. As the Opinion on Reconciliation of the Commercial Code and the Business Accounting Principles states, the Japanese corporations which are audited by a CPA, as required by the Securities and Exchange Act and have well-organized internal audit systems, need not have the statutory auditor.

Legal auditing by CPA's based on the Securities and Exchange Act started in 1951. At this present time, the following corporations are audited by CPA's and the number of such corporations amounts to about three thousand.

1. Listed corporations on the Japanese Stock Exchange
2. Corporations which plan to make registrations of offerings of more than 50 million yen worth of securities in a year
3. Corporations which plan to register to sell more than 10 million yen worth of securities in a year
4. Corporations whose registration on securities was approved

(These four requirements are based on the Securities and Exchange Act.)

5. Corporations which apply for listing on the Japanese Stock Exchange

(Based on the Listing Requirement of the Stock Exchange.)

6. Corporations who have issued stock for over-the-counter sales on the Tokyo Stock Exchange

(Based on the Rule of Tokyo Securities Brokers Association.)

These 3,000 corporations are leading corporations in all fields of industry in Japan. The social impact of audits by CPA's is profound. Frankly speaking, however, the significance of the audits by CPA's has not been properly recognized by the Japanese society. Even the corporate management accepts the audits by CPA's just to fulfill the legal requirement of the Securities and Exchange Act. As mentioned before, Japanese bankers are not the best friends of CPA's. In these two or

three years, however, the Japanese society has vigorously called for the upgrading of audits by CPA's, especially since several large listed corporations went bankrupt in 1964.

There seem to be at least two problems to be solved. The first problem concerns the revision of auditing standards and working rules to conduct an audit; the second one involves the upgrading of Japanese CPA's. These two problems were considerably aided by the recent revision of the Working Rules for Conducting an Audit and the Certified Public Accountants Law. In 1965 the Business Accounting Deliberation Council revised the Working Rules for Conducting an Audit (originally established in 1950) by making them more powerful. The main points revised were (1) the confirmation of accounts receivable, (2) the observation of physical inventory, and (3) the audit of financial statements of substantially controlled subsidiaries. The Certified Public Accountants Law was revised in May, 1966, to upgrade the audits by Japanese CPA's. Two main points revised were (1) the approval of incorporation of audit corporation with five or more certified public accountants (including foreign CPA's) to allow the diversified and high quality professional services (Article 34-2, 34-4), and (2) the change of the organization of the Japanese Institute of Certified Public Accountants into a special incorporation which is prescribed by the Certified Public Accountants Law (Article 43, 44, 45, and 46). All certified public accountants in Japan are required to join the Institute to strengthen the social status of accountants as a professional group. Nothing, however, can be more important than the consciousness of CPA's as professional accountants to upgrade their social function.

SUMMARY

Japan's history of financial reporting of more than 100 years reveals the following characteristics:

1. The initiative for the improvement and unification of financial reporting has been taken by the government.
2. This movement has utilized foreign concepts and practices of financial reporting.
3. After World War II, the improvement of financial reporting has been invigorated by the interaction of the Commercial Code and the statement of Business Accounting Principles.

ABC Company*
Balance Sheet
September 30, 1964
(million yen)

Assets	*24,837*
Current assets	*13,495*
Cash	1,921
Notes receivable[1,2]	3,058
Accounts receivable[1]	2,332
Prepaid expenses	55
Short-term loans	155
Other short-term credits	118
Finished goods[3]	1,214
Raw materials[3]	1,562
Goods in process	2,968
Supplies	112
Fixed assets	*11,280*
(Tangible fixed assets)[4]	*8,630*
Buildings	2,319
Structures	242
Machinery and equipment	4,687
Vehicles and delivery	23
Tools and fixtures	233
Land	211
Construction in progress	915
(Intangible fixed assets)	*497*
Goodwill	368
Other intangible fixed assets	28
Long-term prepaid expenses	101
(Investments)	*2,153*
Investments in securities	845
Investment in subsidiaries	463
Long-term loans[1]	753
Other investments	92
Deferred charges	*62*
Unamortized discount on bond payable	23
Research expenses	39
Total	*24,837*

Liabilities	*15,121*
Current liabilities	*11,207*
Notes payable — trade[1]	2,780
Accounts payable[1]	2,530
Short-term loans	4,019
Debentures — due within one year	73
Accounts payable — others	513
Accrued expenses	345
Deposits — received	924
Other current liabilities	23
Fixed liabilities	*3,535*
Debentures	2,200
Long-term loans	1,335
Provisions	*379*
Provision for employees' retirement	240
Provision for bad debt	36
Provision for price fluctuation	100
Provision for self-insurance	3
Capital	*9,716*
Capital stock	*3,600*
Legal reserve	*1,883*
Earned surplus	673
Reserve for revaluation	1,210
Surplus	*4,233*
General reserve	2,600
Reserve for dividend payment	760
Reserve for employees' retirement	210
Reserve for raw material price adjustment	340
Profit carried forward from the previous period	75
Profit for the current period	248
Total	*24,837*

[1] Short-term credit to subsidiaries: 1,695
Long-term credit to subsidiaries: 608
Short-term debt to subsidiaries: 395
[2] Notes receivable discounted: 862
[3] Valuation of finished goods and raw materials is based on "Cost or market, whichever is lower" basis
[4] Accumulated depreciation of tangible fixed assets: 9,579

ABC Company
Income Statement
from April 1, 1964
to September 30, 1964
(million yen)

Regular income		
Operating income		
Operating revenue		
Sales		14,677
Operating expenses		
Cost of goods sold	13,079	
General administration and selling	616	
Development and research	62	13,757
Operating income		920
Non-operating income		
Non-operating revenue		
Interest and dividend income	122	
Miscellaneous income	78	200
Non-operating expenses		
Interest expense	394	
Miscellaneous expenses	241	
Loss on reduction of inventory to market for the current period	18	653
Regular income		467
Special income		
Special profit		
Disposition of provision for price fluctuation for the previous period		50
Special loss		
Appropriation of provision for price fluctuation for the current period		100
Profit before tax for the current period		*417*
Allowance for accrued income tax		169
Profit for the current period		*248*
Profit carried forward from the previous period		75
Unappropriated profit for the current period		324

Notes:
Sales to subsidiaries: 1,991
Purchases from subsidiaries: 1,287
Total amount of regular depreciation of depreciable assets for the current period based on the Corporation Income Tax Law: 504
Total amount of actual depreciation of depreciable assets for the current period: 519

ABC Company
Proposal Pertaining to the Appropriation of Profit
(million yen)

Unappropriated profit for the current period	324
Appropriation plans:	
Legal earned surplus	21
Dividends to shareholders (12% per year)	216
Bonus to officers	6
Profit carried forward to the next period	81

* This set of financial statements is cited from *A Handbook of Accounting Regulations,* Tokyo, Japan: Dobunkan, 1965, pp. 448-49.

Education for Accountancy in Thailand

PIANCHAI NINSUVANNAKUL*

To present more clearly the issue of this paper, the framework of the national economic structure and the educational system in connection with education for accountancy in Thailand should be briefly noted.

GENERAL ECONOMIC BACKGROUND OF THAILAND

Thailand, an independent country in Southeast Asia, is an agricultural country. As other countries in this area, it is called an "underdeveloped country." The 1960 census indicated the population of Thailand to be 25,519,965. In 1963 the population was estimated to be 28,835,000.

Thailand's economy has largely depended upon the production and export of rice, rubber, teak, tin, and other agricultural crops. Approximately 84 percent of the national working force is engaged in agriculture[1] which accounts for 36 percent of the gross domestic product[2] and about 80 percent of exports.[3] Thailand has many natural resources but industrially it remains underdeveloped. Manufacturing accounts for

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[1] Luang Videt — Yontrakich, *Certain Facts About Thailand,* Maryland: Luang Videt — Yontrakich, 1965, p. 24.

[2] *National Income, 1962 Edition,* Bangkok, Thailand: Office of the National Economic Development Board, pp. 16-17.

[3] *Annual Statement, 1960,* Bangkok, Thailand: Department of Customs, p. 1.

only 14.5 percent of the gross domestic product and is done by a large number of small and medium-sized establishments. Large factories are found only in certain fields, i.e., cement, tobacco, tin mining, sugar, beer, liquor, soap, and weaving. Such an economic structure makes Thailand, in both the public and private sectors, a potential exporter of raw and semi-processed materials and an importer of manufactured articles. Each year imports are usually in excess of exports.

Since Thailand is an underdeveloped agricultural country, the labor force is not fully utilized. The normal Thai farmer works only about 100 days in a year; gross national income and per capita income, therefore, are very low in comparison with the developed countries. The average per capita cash income is about $100 per year.[4] A low standard of living relative to other countries is an unavoidable result (see Table 1).

The present total land area of Thailand is about 321 million rais (128.4 million acres) and 62 million rais (approximately 19 percent of the total land area) of this were cultivated in 1959.[5] According to the Six-Year Economic Development Plan (1961-1966),[6] the present forest area of 187 million rais will be reduced to 156 million rais which will result in an additional area of 30 million rais of cultivable land within the planned period.[7] Because of the rapid rate of population growth in Thailand, it is not believed that the 92 million rais of cultivable land will be adequate, and there will be a shortage soon. In addition, agriculture alone will not be fruitful if industrial development is not introduced because the market for agricultural products will not be adequate. It is also evident that while the population is increasing and if the country is dependent on agriculture alone, the per capita income will be lower and lower which will result in a low standard of living of the people. It is fortunate to state that industrial development has been introduced into the Thai economy by many interested parties. This tendency can be seen from the Thai government's industrial development program since 1958. A large number of different categories of manufacturing concerns have been established and a significant increase of employment, of capital investment as well as of the rate of

[4] M. Y. Nuttonson, *The Physical Environment and Agriculture of Thailand,* Washington, D.C.: American Institute of Crop Ecology, 1963, p. 113.

[5] *Agricultural Statistics of Thailand, 1959,* Bangkok, Thailand: Ministry of Agriculture, p. 151.

[6] The National Economic Development Board, *The National Economic Development Program, 1961-1963-1966,* Conference Section, Division of Projects, Economic Development Planning Office, Bangkok, Thailand, January 30, 1963.

[7] Office of the Prime Minister, *Government Gazette,* Vol. 77, Part 85, October 20, 1960, p. 38.

Table 1. Income per Capita in U.S. Dollar Equivalents: Thailand and Selected Countries, 1950-1958

Year	Thailand*	Burma*	Philippines*	Japan*	Canada*	United States**
1950	60	31	119	113	1,033	1,369
1951	58	36	128	149	1,182	1,474
1952	60	39	126	165	1,288	1,520
1953	65	44	132	184	1,322	1,582
1954	62	42	132	190	1,243	1,582
1955	77	44	137	209	1,316	1,660
1956	78	47	148	233	1,438	1,742
1957	78	47	151	250	1,438	1,804
1958	79	45	154	256	1,549	1,826

Sources: * Ministry of Agriculture, *Agricultural Statistics of Thailand, 1959, 1960,* Bangkok, Thailand, p. 156.
** Economic Report of the President, Washington, D.C.: U.S. Government Printing Office, 1961, p. 143.

economic growth, and of gross domestic production are accomplishments of this effort.[8]

EDUCATIONAL SYSTEM IN THAILAND

"Seek knowledge when you are young; seek wealth when you are older." This is an old saying which Thai children, from the early days of Thai history, have often been told by their parents. From the early periods of their history, the Thais have realized the importance of education.

Historically, education in Thailand has been a family affair, which means that parents, as a rule, handed down their skill and knowledge to their sons.[9] In 1871 the first school in Thailand was founded by King Rama V. This was the first time that the state took measures for the people's education. Since that time a large number of government schools have been established and private individuals and missionaries have been encouraged to found schools in the Kingdom. In 1921 a law requiring compulsory education was passed to provide elementary education without charge.

At present, the surveys of children undertaken jointly by the Min-

[8] In 1951, the gross domestic product of Thailand was 28,210,000,000 Baht; this increased to 57,223,000,000 Baht in 1961. One United States Dollar is equivalent to approximately twenty Baht. (*National Income, 1962, Edition,* Bangkok, Thailand: Office of the National Economic Development Board, 1962, p. 14.)

[9] *Education in Thailand,* Bangkok, Thailand: Ministry of Education, 1960, p. 1.

Table 2. Vocational Schools in Thailand

Period	Number of Schools	Students	
		Enrolled	Certificate Granted
1958	194	77,522	13,426
1959	192	65,958	15,270
1960	196	60,945	17,211
1961	196	53,050	17,280
1962	199	45,057	17,331

Source: Ministry of Education, Bangkok, Thailand.

istry of Education and the Ministry of Interior show that the present primary school attendance is 92 to 95 percent of the entire population of compulsory school age.[10] By 1947 statistics showed literacy rates of 40 percent for women and 67 percent for men. A recent estimate is that 60 percent of the total population has achieved literacy.[11]

Beyond the seven-year compulsory elementary education is a five-year secondary education program. Secondary education is divided into two branches: general and vocational. General secondary schools are highly popular and the number of schools of this type has increased rapidly. The vocational secondary schools have developed less rapidly (see Table 2). The number of schools, of teachers, and of students at the secondary level are noted in the following:

Statistics at the Secondary Educational Level

	1942	*1947*	*1952*	*1957*	*1962*
Number of schools	19,629	19,661	21,334	24,052	28,031
Number of teachers	66,897	71,920	93,096	112,895	140,755
Number of students	2,624,493	2,658,932	3,030,261	3,750,155	4,690,104

Source: Ministry of Education, Bangkok, Thailand.

Beyond the secondary education program exists a system of institutions of higher education, which consists of teacher-training colleges, military academic schools, police-officer college, and other higher educational institutions in both social and natural sciences. All these higher learning organizations are owned and operated by the state.

In addition to the three military academic schools for army, navy, and air force personnel, and the police-officer college, there are now

[10] *Ibid.*, p. 9.

[11] Wendell Blanchard, *Thailand, Its People, Its Society, Its Culture,* New Haven, Connecticut: Human Relations Area Files, Inc., 1958, p. 459.

eight universities in Thailand with a total enrollment of 43,917 students in 1962.

1. *Chulalongkorn University.* This university was founded in 1917.[12] It has a fairly complete range of faculties: arts, science, education, commerce, accountancy, architecture, engineering, and political science.[13]

2. *Thammasat University.* This school was founded in 1933 and is described in English as the University of Moral and Political Sciences. It has faculties of law, political science, public administration, social work, economics, commerce, and accountancy, but no natural sciences, pure or applied.[14]

3. *Kasetsart University* or the *University of Agriculture.* This school was founded during the Japanese occupation from the base of several governmental training schools for agriculture, fisheries, co-operatives and forestry.[15]

4. *The Medical University.* This school deals entirely with medical sciences.

5. *The Fine Arts University.* This school is primarily concerned with perpetuating and developing certain forms of Thai culture, notably the famous Thai dancing.[16]

6. *The College of Education.* This is indeed a teacher-training university. It concentrates on the preparation of future educators in various fields such as administration, research, and practice in the area of education.

7. *Chiengmai University.* This school was just started in early 1965 with an initial enrollment of 300 students.[17]

8. *Khonkaen University.* This is the newest university. In its initial stage the university is mainly concerned with the engineering education in civil, electrical, mechanical, and hydroelectric areas.

The Thai government's constant attempt to promote university education has had very little success. The number of students enrolled at these universities is still very small (see Table 3). A big increase of students at this level is an urgent contemporary need. In his speech on the inauguration of the Chiengmai University, the King of Thailand,

[12] Ministry of Education, *op. cit.*, p. 20.
[13] *Announcement,* Bangkok, Thailand: Chulalongkorn University, 1959, p. 5.
[14] T. H. Silcock, *Southeast Asian University,* Durham, North Carolina: Duke University Press, 1964, p. 36.
[15] Kasetsart University, *Undergraduate Handbook, 1959-1960,* Bangkok, Thailand: Bangkaen: Kasetsart University, 1959, pp. 1-5.
[16] T. H. Silcock, *op. cit.*, p. 38.
[17] *The Asian Student,* California, U.S.A., March 6, 1965, p. 4.

Table 3. Number of Students Enrolled in the Universities in Thailand, 1962, by Institution

Name of the University	Students		Teachers
	Enrolled	Degree Granted	
Chulalongkorn	6,252	896	568
Thammasat	30,156	748	326
Kasetsart	2,103	220	325
Medical Science	3,222	441	917
Fine Arts	387	13	117
College of Education	1,797	454	174
Total	43,917	2,772	2,427

Source: Ministry of Education, Bangkok, Thailand.
Notes: Degrees granted were bachelor degree and higher.

Bhumipol Adulyadej, said that the country needs "good men with brains" for its development and the new institution of learning should provide its share.[18]

In summary, there are four levels in the Thai national educational system:

1. *Pre-primary education (kindergarten)* is designed for children between 5 and 7 years of age; it is not compulsory.
2. *Elementary education* is divided into seven grades. This level of education is compulsory according to the Compulsory Primary Education Act; all Thai children between 8 and 14 years of age must go to school.
3. *Secondary education (or high school)* is divided into two channels: general secondary education and vocational education; both are five-year courses.
4. *Higher education* is generally a four-year system, except in architecture, pure sciences, and medical science, which may require five or seven years.

PROBLEMS ENCOUNTERED

Modern conditions and trends create increasing demands for accounting services, services that can be performed most effectively by persons who are broadly educated, technically competent, and morally responsible. A large number of schools and vocational colleges in Thai-

[18] *Ibid.*

land offer both elementary and intermediate courses in accounting, but only two universities offer advanced accounting courses. The diversity in standards of library facilities, teacher training and experience, productivity of students, curricula, and other variables in the different levels of educational institutions creates problems concerning the competency of those accountants who enroll in such varying training organizations and the adequacy of the number of accounting personnel to meet present and prospective needs.

This paper attempts to study and investigate the education for accountancy as well as the accounting profession in Thailand and to analyze and evaluate the present professional activities pertaining to the training of competent accountants. Suggestions and recommendations may be found and advanced for the improvement of the education for future accountants in Thailand.

EDUCATIONAL PROGRAMS

Education for accountancy[19] in Thailand is offered on the bases of voluntary self-study, correspondence, and group instruction. The major portion is offered in three types of educational institutions: high schools, vocational colleges, and the two nationally operated universities (Thammasat University and Chulalongkorn University).

High School Level

In 1962 there were 28,031 high schools in Thailand. Accountancy is one of the required subjects in the curriculum at this level. It is one of the courses included in the mathematics subject area,[20] but the content of the accountancy course is elementary. In general, the high school students study accounting courses one hour per week. The purpose for teaching accountancy at this level seems to be to have the students understand simple double-entry techniques and concepts and to develop the habit of keeping personal income and expense accounts as well as business accounts of small privately owned stores. They are not trained here to become future professional accountants. Consequently, the training in accountancy at the high school level in Thailand has very little significance to the national accounting profession.

[19] The term "accountancy" is used in this paper to include both bookkeeping and accounting. Since the distinction between the definitions of the terms "bookkeeping" and "accounting" is not clear-cut in the accounting profession now, the term "accounting" will be employed interchangeably with the term "accountancy."

[20] The subject of mathematics at this level consists of arithmetic, geometry, algebra, and accountancy.

Vocational Level

Of the 199 vocational schools, which had an enrollment of 45,057 in 1962 (see Table 2), only a few schools offered accounting courses. Most of the vocational schools were primarily concerned with other subjects such as communications, railway engineering, nursing, crafts, carpentry, leatherwork, metalwork, electrical engineering, mechanics, printing and agriculture.

Not more than twenty commercial vocational schools genuinely deal with the education for accountancy. Elementary and intermediate accounting courses are offered at this level. Most of the students graduated from these schools are competent to serve as accounting clerks in private firms and governmental organizations, but they are not qualified to serve as an accountant or auditor in the society. Some of the graduates proceed with their advanced studies in universities with a view to be broadly educated, technically competent, and morally responsible, but most of the graduates do not continue their academic trainings. This may be due to their economic environment, the capacity of the universities to provide more opportunity for them, or other reasons. The training of accounting personnel at this level is still relatively low, however, when compared to the demands for accounting services in the business society of Thailand.

Collegiate Level

This is the most important source and almost all of the well-trained Thai accountants come from such higher learning institutions. Unfortunately, at present only two universities offer advanced accounting courses in Thailand. Nevertheless, an examination of present conditions and the training programs of these two universities may reveal prospects of future developments.

Accounting Training at Chulalongkorn University. Chulalongkorn University is the oldest university in Thailand. It was founded in 1917 in Bangkok. The university has seven faculties: engineering, arts, sciences, commerce and accountancy, architecture, political science, and education. The university is affiliated with the recently established SEATO[21] Graduate School of Engineering.

The Faculty of Commerce and Accountancy, which was established in 1939, offers courses in the fields of accountancy, commerce or business administration, economics, and statistics. The Faculty has three main objectives: (1) to provide opportunities for the development of trained personnel; (2) to provide for the development of teachers in

[21] SEATO = the South-East Asia Treaty Organization.

Table 4. Accounting Students at Chulalongkorn University

	Accounting Major Enrollment					Accounting Major Graduates
	First Year	Second Year	Third Year	Fourth Year	Total	B.A. and Diploma
1947	36	31	27	41	135	32
1948	36	25	20	34	115	38
1957	93	80	48	48	269	54
1958	97	91	102	46	336	43
1959	92	104	94	101	391	95
1960	126	117	74	93	410	100
1961	167	131	83	69	450	92
1962	132	181	97	75	485	85
1963	95	170	95	95	455	109

Source: The Faculty of Commerce and Accountancy, Chulalongkorn University, Bangkok, Thailand.

the above mentioned fields; (3) to contribute to an increase of knowledge and better understanding of the aforesaid subjects.[22]

The Faculty is divided into four departments: Accountancy, Commerce, Economics, and Statistics. The enrollment in this Faculty has a significantly increasing trend since its beginning.

1939	89 students
1949	261 students
1959	683 students
1961	932 students[23]

The Department of Accountancy, in particular, has experienced a rapid growth as Table 4 indicates.

At present the Faculty at Chulalongkorn University offers two levels of instruction:

1. A four-year course leading to a Bachelor's Degree in Accountancy, Commerce, Statistics, or Economics is offered to students who have at least a 70 percent average in the prerequisite courses (accountancy, economics, and mathematics) in their second-year's examination.

Those students who pass the second-year's examination but fail to satisfy the special grade requirement of 70 percent in the prerequisite courses may take a diploma course which requires an additional year of study in the Faculty.

[22] *Com.-A/C,* Vol. 2, Bangkok, Thailand: Chulalongkorn University, 1963, p. 1.
[23] *Ibid.*

Table 5. Accounting Students at Thammasat University

	Accounting Major Enrollment			Accounting Major Graduates		
	Male	Female	Total	B.A.	M.A.	Total
1938	106	27	133	...	...	...
1939	212	165	377	...	...	...
1943	575	349	924	56	...	56
1944	669	419	1,088	15	...	15
1947	113	21	134	58	10	68
1948	212	135	347	5	25	30
1953	270	163	433	131	42	173
1954	447	354	801	83	59	142
1955	397	385	782	144	33	177
1956	616	454	1,070	202	116	318
1957	830	559	1,389	82	20	102
1958	820	939	1,759	56	...	56
1959	1,115	1,032	2,147	69	...	69
1960	266	223	489	45	...	45
1961	268	232	500	118	...	118
1962	not available		...	137	1	138
1963	not available		...	193	1	194

Source: Faculty of Commerce and Accountancy, Thammasat University, Bangkok, Thailand.

2. A two-year course leading to a Master's Degree in Accountancy, or Commerce, is available to the graduate who desires advanced academic work.[24]

Accounting Training at Thammasat University. Accounting courses were initially offered at Thammasat University in 1935. At that time accountancy was one required course in the program of Master of Science in Economics. In 1938, the Department of Accountancy was founded at this university. Because of the steadily increasing enrollment, this Department was enlarged in 1949 and called the Faculty of Commerce and Accountancy and now consists of four departments: Accountancy, Money and Banking, General Administration, and Marketing.

Originally, the training program for education in Accountancy at Thammasat University followed that of the Chartered Accountant system of the United Kingdom, i.e., the training program was divided into two levels: three-year and five-year. The student who completed a three-year study was awarded a Diploma in Accountancy which is roughly equivalent to the American B.A. degree. The student who

[24] The curriculum in accountancy offered by the Department of Accountancy of Chulalongkorn University is shown in Appendix No. 1.

completed a five-year program received a Higher Diploma in Accountancy which is comparable to the American M.S. degree. Since 1956, the accountancy curriculum has been changed to a four-year program for the Bachelor's degree and to an additional two-year program for the Master's degree. The full titles of the degrees granted by Thammasat University are Bachelor of Science in Business Administration (Major in Accounting) and Master of Science in Business Administration (Major in Accounting).[25]

The enrollment of the students in the Department of Accountancy at Thammasat University, as at Chulalongkorn University, has substantially increased since its establishment. Some enrollment statistics are shown in Table 5.

Quite obviously, the total number of graduates is relatively low in relation to the total students initially enrolled at this University. A large number of students, however, are still enrolled for a degree at the present time (7,835 students in 1963).[26] The primary reason for the large number of students who have not yet received degrees is that many students have found it difficult to complete the academic requirements within the normal time of four years for a Bachelor's degree and two more years for a Master's degree. This is due in part to the fact that the present teaching system has some inadequacies, and in part to the fact that the students do not study consistently throughout the semester. Another reason is that the Continental traditions of largely unregulated study have been adopted by Thammasat University since its inauguration. Most of the students have not been adequately aware of their own responsibilities, however, to benefit from these traditions. The regulations of the University stipulate that a student cannot register for more than eight years to finish his undergraduate work or more than four additional years to complete his graduate studies from his initial enrollment. As a result, many students quit their academic work when they have registered for more than six years and have found that

[25] The detailed curriculum of the Department of Accountancy of the Faculty of Commerce and Accountancy of Thammasat University is shown in Appendix No. 2.

[26] The number of students enrolled in 1963 in the Department of Accountancy, the Faculty of Commerce and Accountancy, Thammasat University:

	Undergraduate	*Graduate*	*Total*
Male	4,371	97	4,468
Female	3,317	50	3,367
	7,688	147	7,835

Source: *Commencement Yearbook, 1963,* Bangkok, Thailand: Thammasat University, August 20, 1964.

the possibility to receive a degree within the time limits is still uncertain for them. This is a very strange situation to the outsiders.

THE ACCOUNTING PROFESSION IN THAILAND

For several decades before 1939, accounting served primarily as an optional tool of management in Thailand. In those days business records were kept merely for management's own use and benefit. Although corporate management was accountable to the stockholders, most corporations were closely held. Consequently, the owners and managers were usually the same group; there was no great need for extensive accounting records and reports.

In recent decades Thai businessmen have become much more aware than formerly of the value of the information available from a good accounting system. Furthermore, the Thai government has gradually entered the accounting picture by requiring businessmen to keep complete records of business transactions.

Legal Aspects

Within a few decades, numerous laws have been passed in Thailand relating to accountants and accounting services. Some of the most significant are:

The Civil and Commercial Code (as amended to 1953). This law states that:

The directors must cause true accounts to be kept:

1. Of the sums received and expended by the company and of the matters in respect of which each receipt or expenditure takes place.
2. Of the assets and liabilities of the company.[27]

The balance sheet must be examined by one or more auditors and submitted for adoption to a general meeting within four months after its date. . . .[28]

. . . It shall be the duty of the directors to send to the Registrar[29] a copy of every balance sheet, not later than one month after it has been adopted by the general meeting.[30]

The auditors must make a report to the ordinary meeting on the balance sheet and accounts. They must state in such report whether in their opinion the balance sheet is properly drawn up so as to exhibit a true and correct view of the state of the affairs of the company.[31]

[27] *The Civil and Commercial Code,* Section 1206, Bangkok, Thailand: Aksornsarn Press, 1962, pp. 305-6.
[28] *Ibid.,* Section 1197, p. 303.
[29] The Registrar is the governmental official who keeps all information according to the provisions of the Civil and Commercial Code. His office is called the Department of Commercial Registration, Ministry of Economic Affairs.
[30] The Civil and Commercial Code, Section 1199, p. 304.
[31] *Ibid.,* Section 1214, p. 307.

Every company, as a legal entity, must keep accounts, and at the end of each fiscal year the company must send its balance sheet to a governmental officer. These financial statements must be audited by one or more auditors. This is significantly different from the United States where only the corporations which have stocks offered in the U.S. security markets must submit their financial statements to the authoritative agencies,[32] whereas all Thai companies are required by law to submit their reports to the government.

The Internal Revenue Code. This law requires all commercially legal entities[33] to report their financial positions every fiscal period for tax purposes. The required financial reports are: (1) a manufacturing statement, (2) an income statement, (3) a surplus statement, and (4) a balance sheet.

These reports must accompany the enterprise's tax return submitted to the Internal Revenue Department within 150 days, from the next day of the last day of the accounting period.

In general, income tax rates in Thailand are relatively low compared with those of the United States. Tax savings from better accounting methods have not been emphasized. This may be due to the lack of accounting knowledge on the part of most business management and to the relatively light tax rates.[34]

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[32] Actually, in the United States the Securities and Exchange Commission does not require all corporations listing stocks on the New York Stock Exchange to have an audited balance sheet such as the railroad industry.

[33] There are three kinds of commercially legal entities in Thailand:

1. Registered Ordinary Partnership — All partners have unlimited responsibility to the liability of the partnership.
2. Limited Partnership — Limited and unlimited partners are combined together in the same partnership.
3. Limited Company (or Corporation).

[34] At present, the Thai income tax rates are:

A. Individual income tax rates:

Net income less than 10,000 Baht	10%
10,000 Baht to 50,000 Baht	13%
50,000 Baht to 100,000 Baht	16%
100,000 Baht to 150,000 Baht	20%
150,000 Baht to 200,000 Baht	25%
200,000 Baht to 250,000 Baht	30%
250,000 Baht to 300,000 Baht	35%
300,000 Baht to 350,000 Baht	40%
350,000 Baht to 400,000 Baht	45%
400,000 Baht and over	50%

B. Legal entity income tax rates:

Net income less than 500,000 Baht	15%
500,000 Baht to 1,000,000 Baht	20%
Over 1,000,000 Baht	25%

The Accounting Act B.E. 2482 (1939). Some of the most important provisions of this act concerning the Thai accounting are:

1. Persons having the duty to keep accounts are ordinary persons or partnerships and limited companies who are juristic persons, carrying on business in accordance with Section 6 as a normal profession. . . .[35]
2. Accounts to be kept in accordance with this Act are:
   (a) Asset accounts including inventory in possession.
   (b) Cash account.
   (c) Accounts receivable and accounts payable.
   (d) Daily purchase and sales accounts.
   (e) Revenue and expense ledgers.[36]
3. The closing of accounts shall be made at least once in twelve months.[37]
4. Persons having the duty to keep accounts shall submit accounting books to the Accounting Inspector for stamping at a place and within the period of time to be specified by the Minister of Economic Affairs in the Government Gazette. . . .[38]
5. While carrying on business, persons having the duty to keep accounts shall maintain accounts together with supporting evidence at such business premises for a period of not less than ten years from the day the last entry is made in such accounts. . . .[39]

The Auditor Act, B.E. 2505 (1962). This is the most important of all laws for the Thai accounting profession. It specifies the qualifications and performance requirements of the practicing certified public accountants.

The term "authorized auditor" is used similar to "CPA" in the United States. "Authorized auditor" refers to a person holding a valid

[35] (Accounting Act B.E. 2482, Section 7.) The businesses classified in Section 6 are:

1. Businesses which are subject to Business Registration under the Internal Revenue Code.
2. Purchase and sale of land.
3. Hotel.
4. Brokerage or agency.
5. Transport by motor launch or motor bus service.
6. Transport by train or tram.
7. Sea transport.
8. Air transport.
9. Public auctions.
10. Exchange of currency, monetary loans, banking, credit fonciers, and Phoey Kuan.
11. Insurance.
12. Some types of hire of work to be specified by the Minister of Economic Affairs in the Government Gazette. (Such as contractors of civil works.)

[36] *Ibid.*, Section 10.
[37] *Ibid.*, Section 12. *bis.*
[38] *Ibid.*, Section 12.
[39] *Ibid.*, Section 13.

audit license which has not been suspended or revoked.[40] A committee called "The Committee for the Control of the Auditing Profession" has been formed, in the Ministry of Economic Affairs (similar to the Department of Commerce in the United States). This committee consists of fifteen members of which five are governmental officers,[41] two are academic professors,[42] and eight are appointed by the Minister of Economic Affairs. At least half of the appointed members are authorized auditors.

The major functions of the Committee are:

1. To register and issue audit licenses to persons who apply for authorized auditorship.
2. To suspend or revoke audit licenses of authorized auditors.
3. To formulate rules, regulations, and procedures governing the application, issuance, and renewal of the audit licenses or for issuing temporary licenses.
4. To advise universities and other academic institutions on matters concerning auditing.[43]

According to this law "any document which is prescribed by law to be certified by an auditor shall be certified by an authorized auditor, otherwise the document shall not be valid under the provisions of the law.[44]

In connection with the qualifications of the authorized auditor, the law specifies:

Any person to be registered as an auditor shall be a person:

1. who holds a degree in accountancy or a certificate in accountancy which the Committee certifies as an academic qualification not lower than bachelor's degree in accountancy, or one who holds a degree or a certificate not lower than bachelor's degree in a science which includes the study of accountancy and is deemed suitable by the Committee for authorized auditorship.
2. who has undertaken auditing and has acquired a certain degree of experience, and who the Committee deems qualified as a person to be an authorized auditor.

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[40] The Auditor Act B.E. 2505, Section 3.

[41] The five governmental officers are:

1. The Under-Secretary of Economic Affairs as chairman.
2. The Director-General of the Commercial Registration Department.
3. The Director-General of the Comptroller-General Department (or the Central-Government Accounting Department).
4. The Director-General of the Internal Revenue Department.
5. President of the Audit Council of Thailand (or the Comptroller General of the GAO).

[42] The two academic professors are the Deans of the Faculty of Commerce and Accountancy of Chulalongkorn University and of Thammasat University.

[43] *Ibid.,* Section 11.

[44] *Ibid.,* Section 14.

3. who is over twenty years of age.
4. who is of Thai nationality or the national of a country which allows Thai nationals to undertake auditing in its territory.
5. who does not act contrary to public morals.
6. who has not been convicted to imprisonment in a case which the Committee might deem detrimental to the honor of the auditing profession.
7. who is not an insane or mentally-ill person.
8. who performs no other profession which is unsuitable or which interferes with his independence in performing an auditor's duty.[45]

Suspension for a period of not longer than one year at a time or the revocation of an audit license can be made by the Committee when it is evident that an authorized auditor:

1. lacks any of the qualifications prescribed in Section 15 or
2. violates this Act or any Ministerial Regulation issued under the provisions of this Act.[46]

In summary, it is evident that all of these laws have added to the volume of accounting work and to the complexity of the accounting procedures. As a result, many businesses, which in the past did or did not keep books as they chose, now have no option and must not only keep accurate records, but also must keep them in the manner required by the laws.

Organization of the Profession

In Thailand there is only one professional accounting organization: The Institute of Certified Accountants and Auditors of Thailand, which was formed in 1948 to develop and maintain the significance and prestige of the accounting profession in Thailand. Since its inception, the Thai Institute has been composed of accounting professors from the two universities (Thammasat and Chulalongkorn University) and accounting practitioners (auditors and accountants in both governmental and private enterprises). This composition has provided wise and effective leadership for the accounting profession and has

[45] *Ibid.*, Section 15.
[46] *Ibid.*, Section 19. Between November 2, 1962, when the Auditor Act was enacted, and December 31, 1964, 908 auditors were authorized.

Year	*Number of authorized auditors registered*
1962	...
1963	489
1964	419
	908

Source: The Committee for Control of Auditing Profession, Ministry of Economic Affairs, Bangkok, Thailand.

helped in the enactment of the Auditor Act B.E. 2505. At the present time, the Institute has 473 members.

The major purposes of the Institute are:

1. To encourage and foster unity among, and to maintain prestige of its members.
2. To promote, disseminate, and exchange the scientific knowledge of accountancy and its related subjects.
3. To promote the profession of accountancy and its highest standards.
4. To provide co-operation and assistance to its members.
5. To co-operate with and give support to general public activities (other than politics).[47]

Accountants in the Thai Society

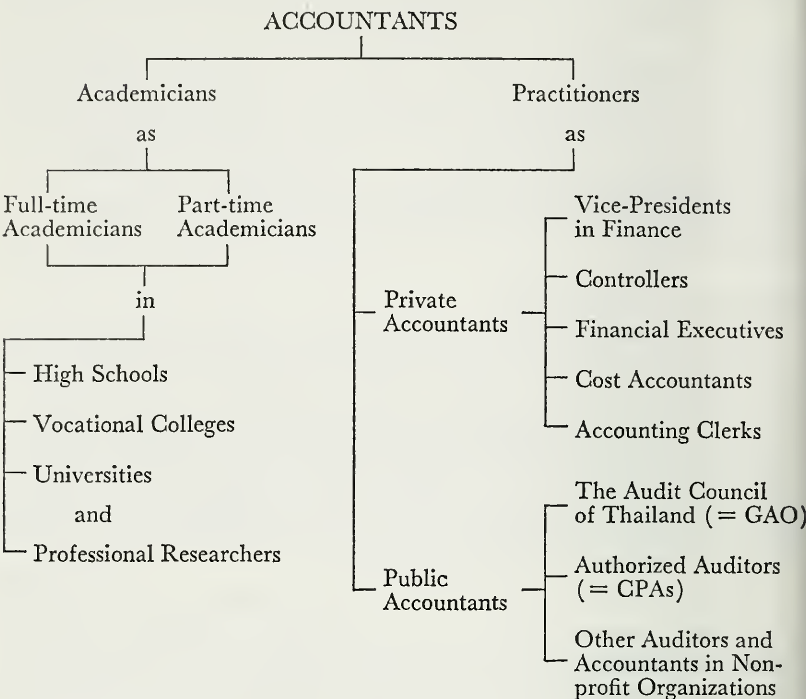
The title "accountant" is an inclusive term in contemporary Thai society as in the United States. It includes academic accountants and accounting practitioners in both private and governmental organizations. Each of these groups is further designated by various titles according to the functions performed by the accountant in a particular organization (see Chart I). Only a brief presentation in this connection for a general understanding of the Thai accountants' contribution in the Thai economic world is given here.

Academic Accountants. In general, the academicians in the area of accountancy consist of the accounting teachers in high schools and in vocational colleges, and the accounting professors at the universities as well as research personnel. In Thailand, there are two major categories of academic accountants: full-time and part-time academicians.

1. The full-time academicians are accountants who perform the functions of teaching and administering the educational institutions. These accountants seldom conduct research to develop accounting concepts and principles. Most of the accounting rules and procedures in practice are specified by The Accounting Act of 1939. This group of accountants does not publish any regular periodical and only articles for special occasions, such as anniversaries or commencements. Changes should be made in the future to elevate the Thai accounting profession to the level of international practice.
2. *The part-time academicians* are mainly governmental officers and financial executives of private industries. They are primarily concerned with accounting instruction and not with the administration of the schools. Almost all of them are capable teachers of specific subjects

[47] By-laws of the Institute of Certified Accountants and Auditors of Thailand, Section 1, Article 3.

Chart I. Persons Who Are Designated by the Title of "Accountant" in the Thai Society



because of their expert knowledge and experience. For example, auditing courses are taught by officers of the Audit Council of Thailand, tax accounting subjects by officers of the Internal Revenue Department, financial statement analysis courses by financial executives of banks, and governmental accounting by officials of the Department of the Comptroller General. This group of professional accountants attempts to help the students solve problems existing in practice rather than to formulate conceptual accounting frameworks. Nevertheless, they contribute greatly to the accounting profession by helping the students to realize the relationship between theory and practice. Many practical techniques are taught to the students by these people.

Practicing Accountants. Broadly speaking, these are private and public accountants who are engaged in accounting activities of organizations owned by the government or by individuals. The accounting services can be efficiently applied only by these practitioners. The demand for accounting services in Thailand has increased substantially

Table 6. New Registered Companies and Partnerships

Period	Limited Company	Limited Partnership	Registered Ordinary Partnership	Total
Jan. 1, 1956	5,444	2,985	1,300	9,729
1956	332	386	259	977
1957	276	475	199	950
1958	307	677	199	1,183
1959	329	808	231	1,368
1960	314	1,100	263	1,677
1961	350	1,182	205	1,737
1962	392	1,157	167	1,716
1963	364	1,026	100	1,490
1964	415	1,160	100	1,675
Total	8,523	10,956	3,023	22,502

Source: Department of Commercial Registration, Ministry of Economic Affairs, Bangkok, Thailand.

during the past two decades both in the public and private sectors. The increase of budget expenditures from 146 million Baht in 1942 to 12,420 million Baht in 1965 indicates the great need for public financial personnel as well as for government-accounting personnel existing in the public sector.[48] As a result, the government has become the largest employer of accountants. A vast majority of the well-educated Thai accountants are employed to staff the financial system both in central and local governments. Similarly, a tremendous increase in the number of business firms in recent years also requires a great number of practicing accountants because every legal commercial entity is required by law to keep accounts and submit audited financial statements to the government periodically. The rapid increase in the number of legal commercial entities can be seen in Table 6.

Because of this dramatic increase, the accounting profession finds itself unable to meet the present demands for its services because, in general, such services can be competently performed only by those persons who have been trained in accounting courses at the high schools, vocational colleges, and university level. Unfortunately, only a small number of accounting personnel are available today to meet such demands. Especially few are the accountants who have been enrolled at the higher educational institutions (see Table 7). Con-

[48] Department of Comptroller General, Ministry of Finance, and Bureau of the Budget, Office of the Prime Minister, Bangkok, Thailand.

Table 7. Accounting Degrees Earned in Thailand

(This includes bachelor's degrees and all higher degrees)

Period	Total	Male	Female
1959	107	49	58
1960	137	49	88
1961	176	69	107
1962	182	86	96

Source: National Statistical Office, Office of the Prime Minister, *Statistical Yearbook, Thailand, 1963.* Bangkok, Thailand, p. 110.

sequently, many opportunities exist for accounting graduates in the Thai economic society, both in the private and public sectors.

The basic published financial statements in Thailand are the balance sheet, the income statement, and the statement of retained earnings which may be combined with the income statement or presented separately or shown as a portion on the balance sheet. In addition, supplementary information is often furnished to meet special reporting requirements or circumstances. Recent developments indicate that a statement of manufacturing cost is included for many industrial organizations.[49]

At present the accounting profession in Thailand has no code of ethics, no uniform auditing standards and procedures, and no generally accepted accounting principles. Most accounting techniques employed vary with the type of industry, size of the firm, the competency of the accountant, etc. The words ". . . in conformity with generally accepted accounting principles . . ." does not appear in the opinion of the report of the Thai auditors. The writer is inclined to support this treatment rather than the American CPA's treatment as no one seems to know exactly what the "generally accepted accounting principles" are. Only the "generally accepted accounting practices" are known.

Only a small number of companies now have stocks listed in the Thai security-exchange market. The requirements of the Thai Securities and Exchange Commission have not been established as in the United States. Only one foreign auditing firm — Price, Waterhouse and Company — has an office in Thailand currently.

In addition to auditing accounts and preparing published financial statements, the Thai authorized auditors may also render such services as tax consulting, preparing tax returns, accepting appointments as

[49] Examples given in Appendix Number 3.

trustees, acting in liquidations, providing assistance in the field of financial management, installing accounting systems and cost and budgetary controls, and acting as the registrar and transfer agent of shares and debentures of the company.

EVALUATION OF THE EDUCATION FOR ACCOUNTANCY

In addition to the general conditions, teaching programs, and learning activities at the three levels of education for accountancy in Thailand previously described, a variety of problems, such as the co-operation between the accounting professional organization and the universities, the encouragement given by the accounting educators to the students, the differences of library-facility standards at the three various levels, and the productivity of the accounting students exists. This paper cannot evaluate comprehensively all the issues which exist in this area. The focal points of this research are the accounting curriculum and the teaching methods currently used in accounting courses. They are fundamentals in the process of educating an adequate number of sufficiently qualified personnel to meet the contemporary and prospective needs.

Curriculum for Accounting Majors

It is true that no generally accepted criterion for curriculum evaluation exists.[50] If the purposes of education can be established, however, they can serve as guidelines for evaluations. Tonne asserts three major purposes for accountancy.[51] These purposes can be applied to the three levels of education identified earlier. First, high school students can be given a knowledge of accountancy relative to small businesses and personal financial affairs. This course should include not merely the maintenance of household or personal accounts but also the non-technical interpretation of corporate financial statements which are published in the newspapers. Second, the more technical elements of accountancy can be reserved for a specialized course that undertakes to train vocational students to obtain positions as bookkeepers or ac-

[50] Herbert A. Tonne, *Principles of Business Education,* New York: McGraw-Hill Book Co., Inc., Third Edition, 1961, p. 512.

[51] "1. Students can be given a knowledge of bookkeeping as it applies to ordinary business services in a one-semester course or as part of the junior business-training course.
2. The more technical elements of bookkeeping can be reserved for a specialized course that will undertake to train students to obtain positions as bookkeepers.
3. Bookkeeping as an aid in the management of business enterprises may be assigned to a supplementary course, or, perhaps, be delegated to the junior college or collegiate schools of business." *Ibid.,* p. 13.

counting clerks. Third, accountancy must be taught, to the collegiate students who are majoring in accountancy, as an integral part of management in modern business enterprises as well as in governmental organizations. Theoretically, these three objectives have been realized by the accounting educators in Thailand, but practically, some inadequate curricula still appear at all levels.

High School Level. No accounting course relating to the interpretation of published financial statements is offered. Although students at this level are not trained to be future accountants, certain basic accounting knowledge in such course is a necessary tool for the average person.

Vocational Level. Thai accounting students do not have an internship program during their academic period even though their primary objective is to learn more technical skills and practical knowledge in order to become competent accounting clerks. More courses in practice should be assigned to the students at this level.

Collegiate Level. Most well-trained Thai accountants are university graduates. They are the leaders of the accounting profession and have greater responsibilities to the society. As a result, their contributions to others are not limited to their technical competency but also depend on their moral responsibilities. Unfortunately, subjects on liberal arts or general education courses, such as anthropology, astronomy, the humanities, philosophy, and rhetoric, are not included in the accounting curriculum in Thailand, with the exception of Thammasat University where some are offered.

At least, the basic objective of education for accountancy at this level should include the following:

1. Basic training for leadership in business
2. Preparation to be of service to business and to obtain a position as an accountant
3. A knowledge of the arts and sciences which will provide a background and a continuing interest
4. A sense of social responsibility
5. Ability to think analytically
6. Ability to communicate effectively
7. An appreciation of professional status
8. A sense of ethical responsibility.[52]

In this connection, the Committee on Professional Education in

[52] Wayne Melvin Higley, *An Evaluation of Some Aspects of Accounting Education,* unpublished Ph.D. thesis, Graduate College, University of Illinois, 1962, p. 38.

Accounting of the American Accounting Association noted six essentials to achieve the objectives of accounting education:

1. A foundation upon which the student may base advancement in his profession, advancement eventually into positions of leadership and responsibility.
2. The tools and skills necessary to recognize problems and to devise workable solutions or recommended actions.
3. Theoretical background necessary to proper interpretation of practical problems.
4. Materials from actual experience to acquaint the student with some possible early practical applications.
5. Acquaintance with the professional status he will assume in his chosen area of accounting practice.
6. An awareness of the ethical and social responsibilities which are expected in the economic and business environment in which he will be serving.[53]

The collegiate curricula in Thailand have stressed the number of hours each semester that should be devoted to accountancy. More than eight hours per week are accounting courses.

In summary, the philosophy underlying the curricula and the point of view of the administration, as well as the aims and objectives of the Thai accounting schools, are well stated but not fully implemented. The present curricula are not considered perfect nor unchangeable. In addition, most of the courses are given during the day to full-time students. This does not open the door for those students who work during the day and wish to go to school at night.

Teaching Methods Currently Used in Accounting Courses

In general, the lecture method, examinations and quizzes, reading assignments, written problems, and visual aids are methods which are universally recognized as being essential to effective accounting education. Some selected methods applied in Thailand are discussed here; they are similar to those of the United States', except for accounting laboratories, seminars, and on-the-job training which are not utilized in Thailand.

Examinations and Quizzes. The Thai teaching system is closely akin to the European system. The quizzing method is seldom used; "only one examination per semester" is the generally employed method at all academic levels. These methods have substantial impact on the yield

[53] Committee on Professional Education in Accounting, American Accounting Association, "Report," *The Accounting Review,* April, 1959, pp. 197-98.

rate of the education, because some students enjoy too much freedom before the final examination. If a student fails, he has to wait for the next semester's final, because there is no cumulative score available for his grade. As a consequence, Thammasat University has a high enrollment with not more than two hundred graduates a year (see page 86). Most students must spend more than four years to pass the four year curriculum.

Visual Aids. Presently very few visual aids are used in the accounting instruction in Thai schools. It would be very effective if audio-visual aids such as opaque projectors, slides, and television sets could be provided in the classrooms; owing to the lack of such instruments in Thailand, however, their use is not expected in the near future.

Internship. This is one of the important avenues to accounting education. It provides an opportunity for the student to work with a public accounting firm or in an industrial or commercial accounting position. Unfortunately, this method is included only in the curriculum of Thammasat University; other schools do not use this method. It is possible that the internship technique will soon be accepted at both vocational and collegiate levels in accounting education in Thailand.

In addition, as in the United States, all Thai accounting students are grouped together. Those students who wish to enter the public accounting profession are not separated from those preparing to work for private employers or governmental organizations. This is a situation awaiting future development.

It is desirable, however, to develop the presently available teaching methods mentioned above and to include the accounting laboratories, seminars, and on-the-job training in the teaching program. Particular attention should be placed upon accounting laboratories which are planned to give the students an opportunity to analyze financial data and report their findings, or to develop a strategy for the solution of problems while relying on their own abilities.

The problem of achieving both mass and quality education for accountancy in Thailand is far from solved and will require efforts and experimentation at the three educational levels, particularly the collegiate.

Some additional generalizations based on the analysis of the Thai curriculum and teaching methods are:

1. Almost every accounting course in Thailand is taught by the lecture method. The student is seldom given a practical working test under conditions which correspond closely to those of practice.

2. The emphasis is on financial accounting; only one or two courses in cost accounting are given at the collegiate level.
3. Only one accounting curriculum is offered with the emphasis evenly divided among private, independent, and governmental accounting.
4. None of the schools, except Thammasat University, have an internship program.
5. No night schools and summer sessions are offered for accounting students except by a small number of private vocational institutions.
6. Only one course of auditing, covering both theory and practice, is offered at the undergraduate level. This does not provide adequate knowledge for a competent and responsible auditor if the graduate wishes to enter this career.
7. The accounting textbooks of Thailand of today are a great improvement over the textbook of the past. However, they are still inadequate and require further elaboration because most advanced accounting topics have not been included in the present accounting texts.

If national educational advancements in accountancy are achieved, the contributions of Thai accountants to the successful modernization of Thailand itself will be substantial. The contemporary movement to improving accounting education is a *sine qua non* of the Thai society.

SUGGESTIONS AND RECOMMENDATIONS

Many improvements should be made in the field of education for accountancy in Thailand. Some of the urgently needed and possible improvements are noted here.

Expansion of Accounting Training

As previously discussed, the employment opportunities for accountants are bright in both the private and public sectors of the Thai economy. To meet the increasing demands, an expansion of the total educational program for accounting personnel is one of the important needs of the profession. Such expansion may be achieved in the following ways:

Employing Capable Graduate Students as Instructors. This method is generally used in the United States but it has never been employed in Thailand. Part-time instructors are a significant source of accounting teachers. Their use may also serve an economy measure in salary costs during the process of expansion.

Offering Specialized Accounting Courses in Night School. In Thailand, accounting instruction is not available at night except in a few

private vocational schools. Specialized accounting courses offered by this type of educational institution could provide opportunities for those students who work during the day and wish to advance academically.

Expanding Accounting Training Programs Throughout the Country Rather Than Restricting the Collegiate Learning to Bangkok. It has already been pointed out that only Thammasat and Chulalongkorn Universities, which are located in Bangkok, offer advanced accounting courses. Actually, this level of education should be extended throughout Thailand, especially in the larger cities, such as Chiangmai in the North, Haadyai in the South, and Ubol in the East. In the initial stage, extramural credit courses might be offered to the accounting students who cannot go to study in Bangkok.

Offering Summer Session at the Collegiate Level. The two semester system in Thailand[54] does not provide for summer school at the university level. Such a situation should be changed to the extent that those students who have no chance to attend regular full-time study and those who wish to graduate in a shorter period can apply for summer training. This method could also elevate the quality and prestige of the profession.

Facilitating Graduate Studies in Accountancy

Only one student was awarded his Master's degree from the Thai universities in 1962 and again only one in 1963. Such a situation deserves an investigation to determine the underlying reasons, as 147 graduate students were enrolled at Thammasat University in 1963 (see page 87). The large difference between the number of graduates and the enrollment may be due to inadequate library facilities and instruction system, the attitude of the students toward graduate studies, or the curricular deficiencies. These fundamental obstacles should be improved because graduate education should be interested specifically in professional growth at both the theoretical and practical phases. Intellectual understanding should be more dominant than technical training because such understanding can be further employed as an efficient tool for the development of accounting knowledge, abilities, and professional attitudes. Briefly, graduate students should be trained as broad-gauged accountants.

[54] Calendar of Thammasat University:
First semester: From June 16 to October 5.
Second semester: From November 16 to March 7.
Calendar of Chulalongkorn University:
First semester: From June 10 to October 20.
Second semester: From November 9 to April 5.

Accounting Research Programs by the Professional Organization and the Universities

Such activities must be an integral part of the growth of the Thai accounting profession. New ideas, concepts, and theories can be developed by this process and contributed to the world of the accountants. Unfortunately, such a program has never been undertaken by the professional organization or the universities in Thailand. No accounting research agency has yet been established. It is hoped that the future Thai accountants will be interested in this area and contribute more ideas for the development of the universal accountants' world.

Accounting Periodicals or Bulletins

These professional publications play a significant role in elevating and developing the accounting profession in many countries but there is only one, *Accountants' Journal,* published by the Institute of Certified Accountants and Auditors of Thailand, in Thailand. Such publications seem to be a prerequisite for a strong and progressive Thai accounting profession.

Arranging Professional Conventions Periodically

Few accounting conventions are held in Thailand, except the annual meeting of the Institute of Certified Accountants and Auditors of Thailand. The exchange of ideas and experiences is an important avenue for the growth of accounting knowledge. Obviously, this area offers much room for development.

Developing International Relations

Modern development of the accounting profession requires international communications among accountants all over the world. The need for international exchanges by the profession should be recognized by the progressive accountants. This is also one of the proposed methods to educate competent Thai accountants. Broad and universal accounting frameworks are required by the profession in the process of developing accounting concepts and principles.

Cooperation Among the Professional Organizations, Accounting Institutions, Business, and the Government

This is another essential in the process of training accountants in Thailand because a variety of benefits can be gained from such cooperation. For example, the placement activity as well as the manpower distribution of the nation can be coordinated, the national educational scheme can be adjusted to a more pragmatic level, and the

accounting services available to society can be improved to an extent appropriate and adequate to meet the demands.

Finally, it should be generally accepted that the function of an accounting school is not sufficiently described when we merely say that it is to teach accountancy, or to train accountants. It is to teach accountancy in the grand manner and to produce great accountants. There are reasons to believe the profession of accountancy is approaching a stage where it will come to be recognized as one of the great professions of the society. The future success of many companies will depend largely upon their ability to gain and retain the favorable attention of the collegiate accounting student of today, the most important information contributor of tomorrow. The accounting educators must look ahead into the future as Blessing expresses:

> Everything in the past dies yesterday; everything in the future was born today. The future so terribly real waits where it cannot be seen and comes rushing at us like the wind. What does history say of tomorrow? History says tomorrow waits with a big broom. Lincoln said the dogmas of the quiet past are inadequate for the stormy present. We must think anew; we must act anew, "We must disenthrall ourselves." When you disenthrall yourself you break from the bonds that hold you. You cut loose from old traditions and begin to make new ones.[55]

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[55] Charles A. Blessing, "Two Cities' Designs for Life in Midland and Detroit," *Graduate Comment,* Detroit: Wayne State University Press, Vol. IV, October 1960, p. 6.

Appendixes

Appendix 1. Curriculum of the Faculty of Commerce and Accountancy, Chulalongkorn University

FIRST YEAR

		Hours per week	*Semester credits*
AC 111 ab	Principles of Accounting–Introductory		
	Lectures	2	4
	Practice	4	4
CO 111 ab	General Commercial Knowledge	1	2
EC 101 ab	Principles of Economics	2	4
EC 183 ab	Economic Geography	2	4
EC 181 ab	Economic History	1	2
ST 160 ab	Mathematics	3	6
CA 111 ab	Technical English	2	2
CA 112 ab	Written English	3	3
CA 113 ab	External Reading in English	..	1
CA 151 ab	Introduction to Logic	1	2
	Total	21	34

Remarks: 1. The first year basic course is common to all departments.
2. All subjects mentioned above are compulsory.

SECOND YEAR

		Hours per week	*Semester credits*
AC 211 ab	Principles of Accounting–Intermediate		
	Lectures	2	4
	Practice	4	4
EC 201 ab	Principles of Economics	2	4
EC 281 ab	Economic History	1	2
ST 260 ab	Mathematics	3	6
CA 211 ab	Technical English	1	1
CA 212 ab	Written English	4	4
CA 213 ab	External Reading in English	..	1
CA 231 ab	Introduction to the Legal System	2	4
CA 251 ab	General Psychology	2	4
	Total	21	34

Remarks: 1. The second year basic course is common to all departments.
2. All subjects mentioned above are compulsory.
3. In the academic year 1964 the following subject is exempted:

CA 231 ab	Introduction to the Legal System	2	4

and the following subjects are to be taken:

CO 111 ab	General Commercial Knowledge	1	2
CA 151 ab	Introduction to Logic	1	2
EC 282 ab	Economic Geography	1	2

THIRD YEAR

Accountancy Degree

		Hours per week	*Semester credits*
a. Compulsory Subjects			
AC 321 ab	Accounting Theory	2	4
AC 341 ab	Accounting Analysis — Lecture	2	4
	— Practice	2	2
AC 371 ab	Accounting Procedure and Control	2	4
ST 310 ab	Statistical Methodology and Application	3	6
CA 311 ab	English Comprehension	1	1
CA 312 ab	Written English	2	2
CA 313 ab	External Reading in English	..	1
CA 331 ab	Government Revenue	1	2
CA 333 ab	Law of Partnerships and Companies	2	4
CA 334 ab	Commercial Law	2	4
	Subtotal	19	34
b. Electives			
	Subjects in Accountancy or in other departments		6–8
	Total		40–42

Remarks: Elective subjects are listed below:

Accountancy Department:

AC 372 ab	Mechanized Accounting	1	2

Other Departments:

Any other subjects not already specified above.

Diploma Course in Accountancy

Students working towards a Diploma in Accountancy will pursue the same course of study as the third year students in Accountancy; the following courses, however, must be taken as electives:

AC 372 ab	Mechanized Accounting	1	2
CO 311 ab	Principles of Management	2	4

FOURTH YEAR

Accountancy Degree

		Hours per week	*Semester credits*
a. Compulsory Subjects			
AC 431 ab	Financial Accounting — Lecture	2	4
	— Practice	2	2
AC 441 ab	Cost Accounting — Lecture	2	4
	— Practice	2	2
AC 461 ab	Auditing Theory — Lecture	2	4
	— Practice	2	2
AC 481 ab	Finance	3	6
CA 411 ab	English Comprehension	1	1
CA 412 ab	Written English	2	2
CA 413 ab	External Reading in English	..	1
CA 430 ab	Laws of Family and Succession	1	2

		Hours per week	*Semester credits*
CA 431 ab	Law of Bankruptcy and Arbitration	1	2
CA 433 ab	Taxation	1	2
	Subtotal	21	34
b. Electives			
Subjects in Accountancy or in other departments			6–8
	Total		40–42

Remarks: Elective subjects are listed below:

Accountancy Department:

AC 451 ab	Controllership	2	4
AC 471 ab	Specialized Accounting	2	4
AC 472 ab	Government Accounting	1	2

Other Departments:

Any other subject not already specified above.

Appendix 2. Curriculum of the Faculty of Commerce and Accountantcy, Thammasat University

FIRST YEAR

First Semester	*Lecture hours per week*
1. Introductory Accounting — Section 1	4
2. Economics I — Section I	4
3. Introduction into Civil and Commercial Law	4
4. Economic Geography	4
5. Business English I — Section 1	5
Total	21

Second Semester	
1. Introductory Accounting — Section 2	4
2. Economics I — Section 2	4
3. Secretarial Studies	3
4. General Commercial Knowledge	4
5. Business English I — Section 2	5
Total	20

SECOND YEAR

First Semester		*Lecture hours per week*
AC 200	Economic Principles	4
AC 201	Processes of Organization and Management	3
AC 203	Marketing	3
AC 206	Intermediate Accounting	4
AC 211	Business Statistics	4
AC 291	Business English — Section 1	3
	Total	21

Second Semester		*Lecture hours per week*
AC 204	Personnel Administration I	3
AC 205	Production	3
AC 207	Property Accounting	4
AC 212	Business Statistics	4
AC 213	Macro-economics	4
AC 292	Business English — Section 2	3
	Total	21

THIRD YEAR

First Semester		*Lecture hours per week*
AC 202	Corporation Finance	3
AC 208	Preparation and Analysis of Financial Statements	4
AC 214	Micro-economics	4
AC 215	Civil and Commercial Law	4
AC 221	Cost Accounting I	4
AC 293	Business English — Section 3	3
	Accounting Internship and Field Work	..
	Total	22

Second Semester		
AC 217	Reporting	2
AC 222	Cost Accounting II	4
AC 224	Auditing	4
AC 285	Civil and Commercial Law	3
	Electives	3–4
AC 294	Business English — Section 4	3
	Accounting Internship and Field Work	..
	Total	19–20

Remarks: The electives are the following subjects:

C 211A	Calculus, Theory of Organization
AC 232	Personnel Administration II
AC 252	Principles and Policies of Investment
AC 254	Public Finance
AC 257	Insurance
AC 265	Purchasing

FOURTH YEAR

First Semester		*Lecture hours per week*
AC 216	Taxation	3
AC 218	Business Policy I	4
AC 295	Business English — Section 5	3
AC 321	Advanced Accounting I	4
AC 323	Accounting Systems — Design and Installation	3
	Electives	3–4
	Accounting Internship and Field Work	..
	Total	20–21

Second Semester		*Lecture hours per week*
AC 223	Accounting	4
AC 225	Accounting for Taxation	3
AC 296	Business English — Section 6	3
AC 322	Advanced Accounting II	4
AC 324	Auditing Problems	3
	Electives	6–8
	Accounting Internship and Field Work	..
	Total	23–25

Remarks: 1. The electives for the first semester are as follows:

AC 251 Financial Institutions
AC 271 Business and Government
AC 282 Industrial and Business Psychology
AC 272 Administrative Control
AC 371 Economics for Administration
AC 372 Business Forecasting
C 201B Calculus

2. The electives for the second semester are as follows:

AC 231 Theory of Organization
AC 232 Personnel Administration II
AC 233 Production Administration
AC 252 Principles and Policies of Investment
AC 254 Public Finance
AC 255 Corporation Finance
AC 257 Principles of Insurance
AC 258 Life Insurance
AC 262 Sale Administration
AC 265 Purchasing
AC 325 Specialized Accounting
AC 374 International Trade

MASTER'S DEGREE	*Unit*
1. Advanced Cost Accounting	1
2. Advanced Auditing	1
3. Analysis of Financial Statements	1
4. Internal Auditing	1
5. Advanced Economics	1
6. Corporation Finance	1
7. Accounting Systems	1
8. English	1
9. Thesis	..
Total	8

Appendix 3.

ABC INDUSTRIES CO., LTD.
BALANCE SHEET
As at 31st October, 196_
(ENGLISH TRANSLATION)

Liabilities and Net Worth	
Authorized capital:	
30,000 ordinary shares of Baht 1,000 each fully paid up	30,000,000.00
8,725 15% debenture bonds of Baht 1,000 each	8,725,000.00
Machinery installment contract (within 2 years)	12,998,047.89
Bank overdrafts	52,873,254.89
Creditors	24,124,722.71
Accrued expenses	109,422.06
Baht	128,830,447.55

Assets			
Land			2,122,278.65
Buildings and premises			18,289,827.28
Machinery and accessories			56,600,227.09
Tractors			3,005,816.54
Motor cars and other vehicles			1,299,824.75
Furnitures			561,945.75
Implements			424,085.95
Motor car and tractor spare parts			79,598.00
Investment			219,000.00
Investment in planting sugar-cane			7,379,626.89
Factory supplies			3,185,726.83
Inventories			144,000.00
Debtors			18,505,751.22
Deposits			952,877.80
Cash			
At Banks	Baht	172,201.69	
At Office		918,818.83	1,091,020.52
Profit and Loss A/C			
Balance from last			
Balance Sheet	Baht	12,528,957.85	
Add Loss for the year		2,439,882.43	14,968,840.28

Auditor's Report to the Shareholders

Dear Sirs,

I have examined the Balance Sheet ended 31st October 196_ Manufacturing Account, Trading Account, and Profit & Loss Account as well as documents and vouchers of the ABC Industries Co., Ltd., and have obtained all the information and explanations I have required.

In my opinion, the above Balance Sheet is properly drawn up so as to exhibit a true and correct view of the state of the Company's affairs according to the best of my information and the explanations given to me and as shown by the books of the Company.

ABC INDUSTRIES CO., LTD.

MANUFACTURING, TRADING & PROFIT AND LOSS A/CS

For the year ended 31st October 196_

(ENGLISH TRANSLATION)

Raw materials		14,950,634.34	Cost of goods manufactured		25,398,523.50
Wages and salaries		4,175,329.14			
Manufacturing expenses		6,272,560.02			
	Baht	25,398,523.50		Baht	25,398,523.50
Cost of goods manufactured		25,398,523.50	Sales		44,801,021.56
Inventories at the beginning		4,529,379.38	Sugar inventory at the end		144,000.00
Gross profit		15,017,118.68			
	Baht	44,945,021.56		Baht	44,945,021.56
Administrative expenses		1,820,048.38	Gross profit		15,017,118.68
Selling expenses		8,346,296.79	Sundry income		41,057.44
Interest		7,312,628.12	Net loss		2,439,882.43
Depreciations		19,085.26			
	Baht	17,498,058.55		Baht	17,498,058.55

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CENTER FOR INTERNATIONAL EDUCATION AND RESEARCH IN ACCOUNTING OF THE COLLEGE OF COMMERCE AND BUSINESS ADMINISTRATION

PAUL M. GREEN, Dean

The Center for International Education and Research in Accounting was established to foster the international development of education and research in the accounting discipline, to provide a base for the international exchange of ideas and materials relating to accounting education, to encourage and assist both accounting faculty personnel and students from other countries to come to the University of Illinois for study and research in accounting, and to provide faculty members for assignment to universities in other countries.

The Center, functionally and administratively, is a constituent part of the Department of Accountancy and the College of Commerce and Business Administration of the University of Illinois. The graduate training of a substantial number of international students has been an important activity of the Department for many years.

One of the specific goals of the Center is the publication of reports, booklets, and monographs which further the cause of advanced education and research in accounting.

V. K. Zimmerman, *Director*

OTHER PUBLICATIONS OF THE CENTER

Two new monographs of general importance to the international aspects of accounting have just been completed and are now available.

THEORY OF ACCOUNTS IN DOUBLE-ENTRY BOOKKEEPING

by Professor Karl Käfer (84 pages)........................$2.00

THE EVOLUTION OF DIRECT COSTING

by Professor Charles Weber (128 pages).....................$2.00

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INTERNATIONAL CONFERENCE ON ACCOUNTING EDUCATION

(Proceedings) (144 pages)..................................$1.00

A STATEMENT OF BASIC ACCOUNTING POSTULATES AND PRINCIPLES

by a Study Group at the University of Illinois (40 pages).......$1.00

ER FOR INTERNATIONAL EDUCATION AND RESEARCH IN ACCOUNTING

VOLUME 2, NUMBER 2, SPRING 1967

THE INTERNATIONAL JOURNAL OF ACCOUNTING

EDUCATION AND RESEARCH

UNIVERSITY OF ILLINOIS, URBANA

UNIVERSITY
OF ILLINOIS
CENTENNIAL
YEAR 1967-68

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THE INTERNATIONAL JOURNAL OF ACCOUNTING

EDUCATION AND RESEARCH

Volume 2 · Number 2 · Spring 1967

CENTER FOR INTERNATIONAL EDUCATION AND RESEARCH IN ACCOUNTING
UNIVERSITY OF ILLINOIS · URBANA

Contents

A Note from the Editor

In its inaugural issue, *The International Journal of Accounting* Education and Research was noted as being by design a flexible instrument for the written communication of important ideas relevant to the international dimension of accounting. The early issues of the *Journal* are believed to have demonstrated the use of such editorial flexibility. The initial issue, for example, contained the papers presented at a 1964 Seminar on International Accounting. The succeeding issues have offered important written works from representatives of all sectors of the international accounting community. This issue represents still another approach to content and general purpose of the *Journal.*

Seldom can it be said that the thoughts and works of an individual are truly of such value and magnitude as to be responsible for generating an entire issue of a journal. But the occasion of Professor A. C. Littleton's eightieth birthday brought the realization of the unusual breadth of this scholar's involvement in the entire universe of accounting. His interests were catholic, his personal commitment was total, and his writings were original and influential.

This issue of the *Journal* is dedicated to Professor A. C. Littleton in recognition of his unusual total contribution to accounting. The authors of this issue have indicated by their work the scope and depth of this scholar's influence. His international status is indicated by the numerous translations and citations of his works. We believe this issue brings both new material of relevance to modern accounting and at least partially reveals the scope of Professor Littleton's influence.

A note of caution should be given the reader. Translations of written works from the original to a second language present difficulties. This is particularly true where technical terms, such as those employed in accountancy, are involved. Professor Toshio Iino, Professor J. Peter Holzer, Yukio Fujita, and Roger Mortenson helped in the difficult task of translating several articles in this issue.

Urbana, Illinois
Spring, 1967

A. C. LITTLETON (1886-   )

The Long Shadow of a Scholar

V. K. ZIMMERMAN*

Since his birth in 1886, A. C. Littleton has had the opportunity to see his world undergo significant and, in certain instances, revolutionary changes. Certainly, when one considers the scope and drama of world political and economic events encompassed in these eight decades, such as World War I, World War II, the Russian Revolution of 1917, atomic power, and jet aircraft, he cannot but be impressed by the dynamic environment that was and now exists.

Within his own field of career endeavor, Professor Littleton witnessed and certainly assisted in, if he did not cause, changes of an equal order of importance. The microuniverse which is accountancy has, within this same period of human history, encountered similar forces of change. The recognition of accounting as a legitimate academic area of study; the establishment of a separate, self-regulated profession with a recognized professional examination; a significant shift upward on the social spectrum; and the still-unmeasured impact of the application of electronic data-processing techniques to the recording and interpretation of economic data: all are factors in the current dynamic chapter of the long record of the evolution of accounting. Professor Littleton led and successfully engaged the opportunity to enter into the series of events and decisions of the modern stages of accounting development.

This article attempts to note the unique manner in which Professor Littleton dedicated his personal resources to a lifelong devotion to ac-

* V. K. Zimmerman, Professor of Accountancy at the University of Illinois, is the Director of the Center for International Education and Research in Accounting located at the same University. He served as a Visiting Professor at the Hochschule für Welthandel, Vienna, Austria, in 1960-61.

counting. The record itself is worthy of recording for its elements of personal effort and drama. But, more importantly, the record can usefully indicate to the members of the entire accounting community a pattern of professional development which is manifested in the life efforts of one of its most dedicated citizens.

THE PERSONAL BACKGROUND

The man who was to coauthor with W. A. Paton one of accounting's standard reference works in theory was born in central Illinois near Bloomington. His early years were filled with the normal activity of the day — the high school years seemed to have been quite ordinary. A definite interest in the courses in English literature and written composition was apparent. On the other hand, mathematics and science were remembered as unappealing. The early habit of intensive reading — that later led to a desire to express in writing — was also present.

After high school there was college. For the day, this was a rather uncommon personal decision. The reasons for electing college were never really a clear, conscious choice. Perhaps it was not more than the reflection of a liking for reading and study. Perhaps it was a chance suggestion by a teacher of high school English. Without a conscious identification of the decision factors, he did decide to enter the nearby state university, the University of Illinois. But first, the matter of personal finances required attention. An uncle's skill as a railroad telegrapher was taught to the nephew, and the young novice was employed in small Illinois railway towns, usually on the night shift. The long, lonely hours monitoring the essential signals and protective apparatus of a switching tower undoubtedly gave opportunity for self-examination.

The early interest in English and related subjects remained. In fact, the catalog of another regional university offered an interesting program in this area. But the chance acquisition of a catalog from the University of Illinois dictated another choice. A program of study in "railway administration" was described. His uncle and father had worked in railroading. Perhaps there would be openings in railway administration after college. His choice now seemed clear: study railroading; there was probably no future in English literature anyhow.

And so the decision was made. A freshman year, filled with more satisfactory encounters with English literature, German poetry, and economic history than with "railroad administration" courses, was followed by another revenue-generating period "working on the railroad." A well-deliberated personal urging led him back to the university and there a chance association with two students from Chicago, living in

the same rooming house, who mentioned the relatively new CPA statute for the State of Illinois and the attractions of public accounting as a career. The die was cast; railroading was out; accounting was in. The succeeding college years were focused on the preparation for the profession of public accounting, and employment in a small firm of public accountants in Chicago followed the award of the bachelor's degree.

THE PROFESSIONAL CAREER

The public accounting career of Professor Littleton permitted an exposure to a variety of accounting situations but was short in duration. His return to the University of Illinois after this outside experience was closely influenced by related events.

An unperceived basis for future career decisions had occurred while serving as the audit assistant for a senior accountant, Hiram T. Scovill. If this personal relationship had not developed, if that senior accountant had not himself been an earlier graduate of the same University, if he had not presently accepted the University's invitation to return as a teacher, and if he had not later needed another teacher in elementary accountancy — the next choice of alternatives would not have appeared — teaching or public accounting.

The choice was for the teaching of accounting and, thus, A. C. Littleton in 1915 returned to his former campus as an instructor of accountancy. An eventual return to an audit staff was a possibility, but other factors had begun to exert their influences. His own efforts towards a master's degree had been challenging, especially the courses in economic history, economic theory, and corporation finance. So was his new experience as a teacher.

Professor Littleton's tenure as an accounting teacher was noteworthy because of its length of service (1915-1952), but, more significantly, it was noteworthy because of the important innovations and expansions he generated. This influence on education in accountancy is nowhere better demonstrated than in his pioneering and creative work in graduate accounting education.

Evidence of Professor Littleton's influence on the graduate education in accountancy can be found in several areas. Three important areas — course instruction and teaching assignments, thesis advising, and publications — deserve particular comment.

Course Construction and Teaching Assignments

From a historical point of view, we know that Professor Littleton was asked by the department head, Professor H. T. Scovill, to prepare

a graduate accounting course — the initial one at the University of Illinois. This he did in the 1920's. The course proved successful academically and, as the area of accounting concern grew, so did the number of graduate accounting courses. The initial course in accounting theory was divided into separate theory and history courses. And so the process continued. Professor Littleton also encouraged his colleagues to prepare graduate level work in cost accounting, federal taxes, and governmental accounting. Until his retirement in 1952, Professor Littleton's imprint on all graduate accounting courses was both apparent and real.

The venture into graduate instruction prompted Professor Littleton to undertake simultaneously a course of personal preparation that has rarely been matched. In a day when a bachelor's degree, the CPA certificate, and demonstrated classroom experience were considered quite sufficient to be a capable professor of accounting, Professor Littleton, nevertheless, made further personal preparations. First, he successfully completed the course of study for the master's degree. This was a rather unusual achievement for the time (the 1920's). He did not rest there, however. Instead, he followed a path which required personal and professional courage — he undertook a program of doctoral study in economics. This was successfully completed in the early 1930's.

In addition to having earned the highest academic credentials available, Professor Littleton received invaluable insights for future thesis research direction during his many years of service in directing the program of the Bureau of Economic and Business Research at the University of Illinois.

Thesis Advising

Perhaps no greater creative effort is involved in graduate education than in the supervision of theses. Single-handedly, Professor Littleton used his native ability and his professional experience to initiate and direct thesis work in accountancy at the University of Illinois.

It is in this unusual area that the contribution of A. C. Littleton to accounting education and to the University of Illinois is perhaps most apparent. An examination of university records indicating the total graduate degrees in accountancy to the year of his retirement reveals:

Years: 1913-1952	*Total for the University of Illinois*	*Supervised by A. C. Littleton*
M.S. Theses	225	76 (34%)
Ph.D. Theses	26	24 (92%)

These amazing statistics require no additional comment, but the reader is invited to examine Appendix I to gauge the amazing creativity and breadth of Professor Littleton's effort in this area.

Publications

In the area of scholarly publications, Professor Littleton did not have the unique opportunity to be first in the field as was the case in graduate study. A certain amount of accounting writing already existed, but the significant point is that even in this area he excelled. In fact, it can be justifiably argued that Professor Littleton gave a distinction and recognition to the written expression of accounting theory that did not previously exist.

Professor Littleton authored or coauthored six books in the area of accounting theory. Several have won long-run recognition. For example, his *Accounting Evolution to 1900,* originally printed in 1933, has just been reissued. Also, his work with Professor W. A. Paton, *An Introduction to Corporate Accounting Standards* (1940), is still an accounting best-seller[1] and is recognized as perhaps the basic work in the expression of modern accounting theory.

Another of Professor Littleton's works, *Essays on Accountancy,* has received great critical acclaim. The following brief review from *The Accountants Digest* (September, 1961) is representative:

> Professor Littleton's many valuable contributions to accounting literature have furnished guidance, inspiration, and thought-provoking ideas to accounting students for nearly half a century.
>
> The essays contained in this magnificent volume are mainly extracts from his articles. They are brief and independent of each other. The student may read them in a random fashion or in any desired order. Groupings are in the areas of history, theory, the profession, and education.

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[1] Sales in 1965 were reported to be more than 2000 copies. The following comments appeared in the *Fiftieth Anniversary Record* of the American Accounting Association (1966):

"The monograph was published in February, 1940, and by September of that year, 6371 copies had been distributed as a dividend to members of the Association and the Institute, and another 2517 copies had been sold. A Japanese translation by Seigo Nakajima was published in 1953 (and revised in 1958), of which 14,000 copies have been distributed. In the United States alone, fourteen printings have accounted for 55,000 copies. After more than 25 years, sales continue at a steady pace — now more than 2000 copies per year.

Perhaps it can be said that no single accounting publication in this country has been cited so often, and esteemed so highly by so many, as 'Paton and Littleton.' For over two decades, it has been a staple in courses on accounting theory, and has had a profound effect on accounting teaching and research."

The reviewer believes Professor Littleton to be the outstanding American scholar of accounting theory. This book contains the substance of his best work. Practicing accountants, educators, and students will find it to be extremely interesting and useful. It is highly recommended.

In addition, Professor Littleton has contributed more than 100 articles to accounting and business periodicals (see Appendix II). They, too, have been received by other accountants as important theory contributions.

National and International Recognition

The national and international awareness of the important role played by Professor Littleton in graduate accounting education and the body of important accounting literature has existed for some decades. But the awareness and respect continues to grow today. This increasing recognition stems from two sources: (1) the unique contribution he made to accounting education and writing during his active academic life, and (2) the continuing flow of seasoned accounting writings from this academically retired but mentally active individual.

Perhaps the ultimate national recognition of any accountant, academic or practicing, is election to the Accounting Hall of Fame. Professor A. C. Littleton is one of only thirty individuals so honored, and his election was early in the history of this unique group.

Evidence of the international recognition of Professor Littleton's great contributions to accounting theory and practice may be gathered from several sources. The numerous translations of his books and articles, the frequent citing of his views as the proper expression of American accounting theory positions, and the worldwide sale of his writings are all indications of the unique international recognition afforded this man. Probably no other American accountant is as well known and respected.

Appendixes

APPENDIX I. THESES SUPERVISED BY A. C. LITTLETON (ARRANGED CHRONOLOGICALLY)

Doctoral

Year	*Name*	*Title*
1939	John W. McMahan	The Relation of the Concept of Accounting Cost to Accounting Knowledge
1940	Charles J. Gaa	The Federal Income Tax Concept of Corporation Income
	George B. McCowen	Logical Transaction Analysis
1941	Norbert G. Bausch	The Relation Between Accounting and Certain Recent Developments in the Statutory Law of Business Corporation
	Ralph L. Boyd	A Study of C.P.A. Legislation in the United States, 1896 to 1940
1942	James M. Carrithers	The Accounting View of the Nature of Business Transactions
	Robert I. Dickey	Accounting Aspects of Federal Incorporation
	Robert K. Mautz	A Study of the Content and Arrangement of the Income Statement
	William E. Thomas	Accounting as an Aid to Compliance with the Robinson-Patman Act
1943	Leslie J. Buchan	A Critical Analysis of Recent Formulations of Accounting Principles
	Yee C. Chow	The Accounting Theory of Revenue Charges
	Raymond W. Esworthy	A Historical View of the Accounting Aspects of the Securities and Exchange Legislation of 1933 and 1934
1950	James O. Eaton	An Appraisal of the Relationship Between Accounting and Federal Income Taxation
1951	William L. Campfield	An Inquiry into the Nature of Judgment Formation and Its Implications to the Public Accounting Profession
	Dorothy A. Litherland	A Half Century of Accrual Accounting Theory, 1886 to 1936
1952	Kenneth B. Berg	Objectivity and Relevance in Accounting Evidence
	Ling-Sung Chiao	The Philosophy and Limitations of Social Accounting
	Ming P. Hsu	An Appraisal of Literature Critical of Cost Basis Accounting

Year	*Name*	*Title*
	Walter G. Kell	The Equities Concept and Its Application to Accounting Theory
	Charles Lawrence	The Changing Uses of Financial Statements
	William A. Terrill	Factors Which Modify the Area of Service of Accounting-to-the-Public
	Nelson D. Wakefield	The Historical Development of the Certification of Accounting Statements in the United States
	Glen G. Yankee	The Usefulness of Criticism in Accounting
	Eugene L. Zieha	Accounting under Conditions of Changing Prices from the Debtor and Creditor Viewpoint

Master's

Year	*Name*	*Title*
1924	Ray R. Dobson	The Application of Statistical Methods to the Interpretation of Accounting Data
	Greer G. Fullerton	The Auditor's Use of Statistical Analysis
1925	Frank R. Harms	The Accountant's Use of Ratios
1926	Harold B. Eversole	Seventeenth Century Accounting in England
	Ralph S. Johns	The Natural Business Year
1929	Raymond F. Smith	The Effect of Purpose on the Balance Sheet
	Clarence B. Cox	Economic and Accounting Concepts of Cost
	Jeff A. Anderson	The Historical Development of Bookkeeping in the First Half of the Nineteenth Century
1930	Henry M. Spack	Capital Stock as a Trust Fund
	Hale L. Newcomer	Early Development of Financial Statements
	Walter F. Frese	German Explanation of the Fundamentals of Double Entry Bookkeeping Theory
	George E. Baggs	The Historical Development of American Bookkeeping in the Last Half of the Nineteenth Century
	Essel R. Dillavou	Appreciation, Accounting and the Law
1931	C. Rollin Niswonger	Responsibility for Valuation
	William H. Stout	Development of American Bookkeeping from 1900 to 1930
1932	Kenyon D. Bowes	The Theory of Valuation Accounts
	Walter E. Campbell	Overhead Costs in Hospital Accounting
	Ralph O. Linville	The Purposes and Accomplishments of Professional Accounting Organizations

Year	*Name*	*Title*
	Ralph L. Boyd	A Critical Study of the Illinois Personal Income Tax Law
	C. A. Moyer	A Plan for Reflecting Current Prices in the Ledger
	Frank Grove	Defects in Organization and Accounting Procedure which Permits or Facilitates Fraud
	William J. Jones	The Appreciation Dilemma
	John W. McMahan	The Accounting Problems of the Investment Trust
1933	Norbert G. Bausch	Recent Criticisms of Auditor's Certificates
	Raymond A. Hoffman	Accounting for the Receipt of Stock Dividends
	Julius P. Joseph	A Survey of the Accounting Problems in Corporation Finance
	Nobel J. Litherland	A Proposed Modification of the Methods of Determining and Analyzing Distribution Costs
	Gaze E. Lukas	The Relation of Accounting to Statistics
1935	Walter F. Lawless	The Management's Use of Accounting Data in Promoting Efficiency
1936	Noah Fetter	Recent Tendencies in State Accountancy Legislation
	Donald K. Griffith	A Critical Examination of Proposed Technique for Making Accounting Records Reflect Changes in Purchasing Power
	Edward C. Konchal	Legal, Accounting, and Economic Aspects of Stated Capital
	Tsing-Hao Kung	Chinese Railway Accounting Practices and Their Underlying Principles
	Margaret A. Lamberton	An Appraisal of the Accountant's Service to the Investor in Securities
1937	H. E. Breen	The Effect of Federal Securities Legislation upon the Accountant
	Raymond Einhorn	The Non-Availability of Appreciation Surplus for Cash Dividends
	Poo-Ren Liu	The Preparation of Cost Reports for the Use of Executives
	Kenneth L. Smith	Economic, Accounting and Legal Aspects of Capital Gains and Losses
1938	Russell W. Carr	The American Institute of Accountants, 1916-1936
	George S. Cerny	The Theory of Paid-in Surplus

Year	*Name*	*Title*
1938	Robert K. Mautz	An Asset Approach to the Concept of Income
1940	George R. Catlett	Accounting for Obsolescence of Machinery
1941	Kenneth B. Berg	Some Theoretical Aspects of Accounting for Bond Issues
	Willis A. Leonhardi	The Accounting Treatment of Bad Debts
	Joseph F. A. Schneider	The Statement of Financial Changes
	Nelson D. Wakefield	Evolution of Accountants' Certificates
	Glen G. Yankee	The Problem of Pricing Inventory Items
1942	Howard F. Stettler	Trends in Auditing Examinations
1944	Morris S. Kessler, Jr.	Contribution of Accounting to the War Effort
1947	Anthony H. Asay	The Nature of Accrual Accounting
	Max A. Binkley	Controversial Ideas on Inventory Pricing
	Gerald D. Brighton	Reliance of the Auditor on Internal Control
	Chin-Kiang Kuan	The Cost Basis Theory of Accounting
	Harry G. Marlow, Jr.	Significance of Independence in Public Accounting
	Tom G. Secoy	The Nature of an Accounting Loss
	Clem O. Smith, Jr.	Techniques of Working with Figures in Accounting
	Bernard D. Tarshis	Developments Significant to Accounting During the Decade 1913 to 1923
1948	William D. Barth	The Service of Accountancy to Labor Unions
	Ming P. Hsu	Inflation and Income Determination
	Robert M. James	Reserves Created by Charges in the Income Statement
	Harry T. Magill	The Meaning of Accepted Principles to the Accounting Profession
	Troy L. Mallory	Classification of Auditing Procedures According to Techniques
	Gerald K. Nelson	A Survey History of Standard Costs
	Louis G. Pierce	The Problem of Full Dislosure in Financial Statements
	Arthur G. Schafer	Financial Statements for Employees
	James K. Stalker	Peculiarities of Financial Statement Presentation
1949	Joseph E. Carrico	The Development of the Last-in, First-out Controversy
	Edward E. Judy	Accountancy Training for Non-technicians

Year	*Name*	*Title*
	Hugh W. Matter	The Work of the Special Committee on Public Utility Accounting of the American Institute of Accountants
	John D. O'Neill	Developments in Reserve Classification
	Ramzy K. Rizk	Comparison in Accounting Ideas about Fixed Assets Depreciation in the 1920's and 1940's
	William A. Terrill	Depreciation Problems Related to the Controversy over Restoration of Fixed Assets
1950	Wesley W. Brown	Fifty Years of Cost or Market
	Harry J. Jacobs	The Relationship Between Accounting Principles and Rules
	James C. Miller	Estimates in Financial Accounting
	Vernon K. Zimmerman	A Survey of British Accounting Theory

APPENDIX II. THE PUBLISHED WORKS OF A. C. LITTLETON

Books

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Introduction to Elementary Accounting. Cincinnati, Ohio: Southwestern Publishing Co., 1919.

Structure of Accounting Theory. Urbana, Ill.: American Accounting Association, 1953 (AAA Monograph No. 5).

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Moonitz, Maurice (ed.)

Significant Accounting Essays. Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1965.

Paton, William A.

Introduction to Corporate Accounting Standards. Chicago, Ill.: American Accounting Association, 1940 (AAA Monograph No. 5).

Yamey, B. S. (ed.)

Studies in the History of Accounting. Homewood, Ill.: Richard D. Irwin, Inc., 1956.

Zimmerman, V. K.

Accounting Theory: Continuity and Change. Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1962.

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"Italian Double Entry in Early England," I, No. 2 (June, 1926), 60-71.

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"The Antecedents of Double-entry," II, No. 2 (June, 1927), 140-49.

"Two Fables of Bookkeeping," II, No. 4 (December, 1927), 388-96.

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"What Is Profit?" III, No. 3 (September, 1928), 278-88.

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"Value and Price in Accounting," IV, No. 3 (September, 1929), 147-54.

"The International Congress on Accounting," V, No. 1 (March, 1930), 70-74.

"Cost Approach to Elementary Bookkeeping," VI, No. 1 (March, 1931), 33-37.

"Early Transaction Analysis," VI, No. 3 (September, 1931), 179-83.

"Capital and Surplus," VIII, No. 4 (December, 1932), 290-93.

"Socialized Accounts," VIII, No. 4 (December, 1933), 267-71.

"Socialized Accounts (II)," IX, No. 1 (March, 1934), 69-74.

"The Dividend Base," IX, No. 2 (June, 1934), 140-48.

"Dividends Presuppose Profits," IX, No. 4 (December, 1934), 304-11.

"Value or Cost," X, No. 3 (September, 1935), 269-73.

"Contrasting Theories of Profit," XI, No. 1 (March, 1936), 10-15.

"Professional College," XI, No. 2 (June, 1936), 109-16.

"Concepts of Income Underlying Accounting," XII, No. 1 (March, 1937), 13-22.

"Tests for Principles," XIII, No. 1 (March, 1938), 16-24.

"Relation of Function to Principles," XIII, No. 3 (September, 1938), 233-41.

"Suggestions for the Revision of the Tentative Statement of Accounting Principles," XIV, No. 1 (March, 1939), 57-64.

"Genealogy for 'Cost or Market'," XVI, No. 2 (June, 1941), 161-67.

"Questions on Accounting Standards," XVI, No. 4 (December, 1941), 330-40.

"Meaning of Accounting Education," XVII, No. 3 (July, 1942), 215-21.

"Examination in Auditing," XVIII, No. 4 (October, 1943), 307-16.

"Guidance Tests for Accounting Students," XXI, No. 4 (October, 1946), 404-9.

"Classified Objectives," XXIV, No. 3 (July, 1949), 281-84.

"Significance of Invested Cost," XXVII, No. 2 (April, 1952), 167-73.

"A Reply," XXVIII, No. 1 (January, 1953), 8-11.

"Old and New in Management and Accounting," XXIX, No. 2 (April, 1954), 196-200.

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Hatfield, Henry Rand
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"Vigorous Explanation," XVIII, No. 2 (April, 1943), 156.
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"Qualities of Personality," XIX, No. 1 (January, 1944), 85.
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"Counsels of Perfection," XIX, No. 1 (January, 1944), 86.
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"The Junior Assistant," XIX, No. 2 (April, 1944), 194-95.
"Mathematics," XIX, No. 2 (April, 1944), 195-97.
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"Economic Literacy," XIX, No. 3 (July, 1944), 319.
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"Culture in Accountancy," XIX, No. 3 (July, 1944), 322-23.
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"Claims upon Income," XIX, No. 4 (October, 1944), 452-53.
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"Statistical Accounting," XIX, No. 4 (October, 1944), 457.
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"Effects and Debts," XXI, No. 3 (July, 1946), 340-41.
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"Foundation Courses," XXI, No. 4 (October, 1946), 451-52.
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"Toward a Broad Course," XXI, No. 4 (October, 1946), 453-55.
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Structure of Accounting for Changing Money Values

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LITTLETON'S "INVESTED COST THEORY"

Since the beginning of the twentieth century, the world has twice experienced unusually vigorous inflationary conditions. The first inflationary period was particularly severe in its impact on European countries in the years immediately after the first World War. The second period, which also originated on the European continent, soon was noted in Japan, the United States, and Great Britain in turn during and after the second World War. The impact of these two inflationary periods on accounting was so serious that the prevailing accounting system established on the basis of "historical cost" or "invested cost" lost some of its normal usefulness. Furthermore, the worldwide tendencies toward creeping inflation experienced recently by many countries provides another important motive for the reexamination by accountants in all countries of present accounting practices that are based on the assumption of an unchangeable money value.

The theory of Gold Mark accounting, which originated in the troubled economic environment of Germany during the inflationary period after the first World War, was transplanted to the United States and produced a product in the book, *Stabilized Accounting,* by H. W.

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Sweeney in 1936. Professor Littleton commented on this book as follows:

> The effect of the proposed technic would be to narrow the calculated profit margin on the upswings of the general price level and widen it on the downswings. In a sense, therefore, the idea is to produce a methodology — and a philosophy — for accomplishing systematically what management has long tried to do by increasing depreciation and maintenance in good times and decreasing them in bad times, or by building up surpluses and reserves out of high profits to be used to absorb subsequent losses when the tide had turned.[1]

In 1936, when Professor Littleton wrote this book review, the value of the dollar was the most stable of its history of long-term rhythmical cycles from the beginning of this century to the second World War.

Since the second World War, even in the United States, the interest in the price-level adjustments has increased enormously among accountants. In these circumstances, Professor Littleton presented a report on the "Significance of Invested Cost" at the annual meeting of the American Accounting Association in 1951. His report reads:

> Various ideas have been put forward in the name of making accounting more serviceable; but some of these seem to be capable, if adopted, of befogging some of the important services accounting has been rendering for a long time. Such a result would hardly be progress. On the other hand, it would indeed be progress to develop new techniques for making enlightening, supplementary, interpretive analyses of data already available in today's financial statements and in the accounts behind them. It would not be progress if index number adjustments entered ledger accounts, no matter how the resulting accounts might be named; and it would not be progress if index number adjusted items were substituted in statements for items now standing within the framework of the concept of objectively determined invested cost.
>
> The various ideas of change are undoubtedly put forward with sincerity and in good faith. But do they derive from a clear appreciation of the fact that accounting renders primary as well as secondary services? Is it not the primary function of accounting to furnish to management data about past transactions (invested cost) so that management can benefit from the knowledge of past experience when considering the next future commitments? Management must be able to review its prior efforts; and no better measure of these exists than invested cost.[2]

In contrast with the economic condition existing in 1936, the current trend of the continuous decline in dollar value to date became quite apparent by 1951. This article is concerned with the structure of accounting for changing money value and was stimulated by the account-

[1] A. C. Littleton, "Book Review: *Stabilized Accounting* by Henry W. Sweeney," *The Accounting Review,* XI, No. 4 (September 1936), 296.

[2] A. C. Littleton, "Significance of Invested Cost," *The Accounting Review,* XXVII, No. 2 (April 1952), 168.

ing thought of Professor Littleton, especially as expressed in the two articles quoted above.[3]

THE ACCOUNTABILITY CLARIFYING FUNCTION AND HISTORICAL COST

Regardless of the type of economic unit — profit or nonprofit — the most fundamental function of accounting is to clarify the process of charging and discharging of accountability for the assets entrusted to a specific entity. Accounting data, therefore, should be both objective and verifiable to clarify the process. It follows that either the monetary quantity or the physical quantity of the entrusted assets should be acceptable accounting data to satisfy the tests of such objectivity and verifiability.

In accounting for nonprofit organizations, accounting data may be expressed in terms of either monetary or physical units. For example, both the central and local governments of Japan have two accounting systems: monetary accounting and physical accounting. These two systems employ both monetary amounts and physical amounts respectively to clarify properly the entire accountability process.

Accounting data in business enterprises, on the other hand, are expressed uniformly in monetary terms, since the assets in a business are to be administered for profit seeking purposes. In other words, to clarify the process of stewardship reporting concerning the administration and custody of assets, business accounting calls for the recognition of the actual bargained price, which objectively represents the value of a certain asset when it comes under the custody of the business enterprise. This price is what we call historical cost, invested cost, or original cost in the context of accounting for a going concern.

From the viewpoint of external relations of a business, accounting performs its function to clarify accountability by the use of historical cost to record, measure, and report the process of custodianship and administration of the assets entrusted to the business management by shareholders and other investors. In internal accounting, historical cost is employed to record, measure, and report the scope and performance of authority over, and responsibility for, the assets utilized by each division of the business.

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[3] The author has previously treated the price-level problem in his study, *Accounting for Changing Money Value.* The primary purpose of this study was to construct a new structure of accounting for price-level changes and to predict a new direction of accounting function by examining a mass of data on accounting problems stemmed from price-level changes over the world from the first World War through the second World War to 1957 from the interrelated viewpoint of function and structure of accounting based on a "hypothesis" that traditional accounting based on an "unchangeable money value" convention will be replaced by new accounting based on a "changing money value" convention.

The accounting process for the custodianship and administration of assets in a going concern constitutes a cycle initiating with the original entry and ending with preparation of financial statements based on the price arising from the acquisition transaction amount or original cost of all items of capital, liabilities, assets, expenses, and revenues. The balance of these items carried forward, in turn, constitutes the new accountability of another cycle.

The traditional adherence to historical cost in accounting for a going concern is not merely due to a mere expedient use of past, established practices as is often stated; but, in reality, is due to the essential requirements of the fundamental function of accounting. Historical cost as a means of clarifying accountability, therefore, is a cost figure and a mere symbol of quantity, not a cost value; accounting based on historical costs for clarifying accountability is monetary quantity accounting, not monetary value accounting.

THE INCOME DETERMINATION FUNCTION AND HISTORICAL COST

In addition to the important function mentioned above, business accounting has the further function of determining periodic income as the enterprise is expected to administer entrusted assets in profit seeking activities. In the determination of periodic income, operating income is computed by subtracting from the revenue (value earned) the expenses (value sacrificed) which are associated with such revenue. Net income (profit for capital maintenance) is calculated by the further deduction of other losses (value lost or expired without compensation) for the period.

The meanings of amounts are quite different for the accounting to clarify the charge-discharge process of accountability than for the accounting for periodic income, even though both are calculated in monetary terms. The former deals with a calculation of a monetary quantity, while the latter concerns monetary value.

The determination of the periodic income of an enterprise in our capitalistic society also requires that historical costs be used as a basis to charge expenses or losses against the revenues of a given period, since it is generally held that business income is measured in terms of the original investment expressed in terms of the monetary value existing at the time of the investment, i.e., invested capital value. In this calculation, the periodic expenses are considered to be the expired or lost portion of the invested capital value. Thus, invested cost or historical cost denotes the monetary measure of an economic value at the time it enters

the enterprises. The historical cost used for periodic income determination is nothing more than the invested cost value, whereas, in the accounting for the charge-discharge process of accountability, the historical cost denotes the invested cost amount.

We should realize that historical cost, as used in business accounting, is an integrated concept of two fundamentally different notions — cost amount and cost value.

CAPITAL MAINTENANCE AND HISTORICAL COST

Our modern industrial society generally holds the view that the periodic income of an enterprise, computed to measure disposable profits, is the calculation, based on historical cost, of a remainder after deducting all expenses necessary to maintain a business as a going concern. The purpose of this type of income determination is to maintain monetary capital. But, at the same time, income determination based on historical cost for a going concern has additional reasons. First, the income determined for the current period with the use of historical cost data constitutes only one part of total income determination which covers the entire lifespan of an enterprise. The current period's income relates to the income determined for both previous and succeeding periods. The total of all the individual period incomes of these periods will equal the total income for the entire life of the business. Second, the income determined for the current period must conform to the minimum requirement that the replacement of the same products sold in the current period is essential for a going concern, since a business is required to continue to produce and to sell the same products, at least, in the short run.

To fulfill these two conflicting requirements — monetary capital maintenance and physical capital maintenance — the income determination of the amount of income available for disbursement requires the condition that the historical cost, as a basis of measuring revenue charges, is always equal to the replacement cost necessary to reproduce the same product sold in the current period. Under the circumstances where the market values of all production factors are always changing, income determination based on historical cost cannot harmonize these two requirements — monetary capital maintenance and physical capital maintenance.

To the extent that the concept of monetary capital and income determination for monetary capital maintenance prevails in our society, expenses chargeable against revenue of the period are always measured

by historical cost and not by a replacement cost amount which could secure in the succeeding period production at the same level as in the current period. This is an accounting system for monetary capital maintenance and does not permit the same level of production in the succeeding period in cases where the prices of production factors are higher.

Under the system of income determination for monetary capital maintenance, the amount of funds recovered is not always sufficient to continue the same level of production as historical costs were used to measure expenses. When such funds are not sufficient, the balance must be financed either through the retention of profits, new issuance of stock, or borrowing. This matter is, however, not a problem of income determination, but a problem of financial policy. Therefore, even if productive capacity of the enterprise cannot be kept at the same level, the use of actual replacement cost to measure expenses of production factors are lower than their corresponding historical costs at the time of their replacement. On the other hand, the funds recovered are larger than the funds necessary for physical production by an amount equal to the difference between the historical costs and replacement costs. If productive capacity is to be maintained at the same level, this surplus amount is available for other purposes, e.g., redemption of bonds or reacquisition of capital stock.

Considering that productive engineering and labor productivity are ever-improving, the general long-range tendency of industry seems to be that actual replacement cost, excluding labor expenses, necessary for the acquisition of the same kinds of products as those delivered by the acts of selling to outside parties, will be on the decrease. For that reason, income accounting based on historical cost, which is the way to maintain monetary capital, satisfies with little difficulty the requirements of the maintenance of physical capital as well, so long as it is carried out under the condition of stable money value.

A capitalistic enterprise is a capital organization existing in pursuit of monetary income. It is an undeniable fact in modern industrial society that a business as a going concern repeats its manufacturing and selling activities in a short span of time, but that in the long run it will come gradually to have different activities, adjusting itself to improving productive engineering and hanging social life.

Thus, it seems necessary for the continuous operation of a business as a going concern that the nature of invested capital recovered through operation as well as of profits acquired in excess of it should be re-

garded as free alternative fund or general purchasing power which is available for any proper business use, for example, for the acquisition of any kind of plants, materials, and other productive factors, or, if necessary, for the investment in securities.

In this sense, the origin of the idea of monetary capital is found in the explanation of the attributes of both monetary and nonmonetary assets, representing substantial aspects of capital by a unified concept of "cash." It is a basic structure of accounting for capital maintenance as a free alternative fund and for the determination of disposable income that periodic income is measured by charging all expenses incurred against revenues for the period at their historical costs based on cash disbursements.

RELATIONSHIP OF THE ACCOUNTING FUNCTION TO THE POSTULATE OF THE UNCHANGEABLE MONEY VALUE

An assumption must be made to afford a unified concept of "historical cost" which integrates the two different notions: the invested cost figure from the viewpoint of accounting for clarifying accountability and the invested cost value from an income determination viewpoint. This assumption might be called the postulate of the unchangeable money value.

Business accounting serves two different purposes by using money as a measuring unit: (1) clarifying accountability for custodianship and administration of assets, and (2) periodic income determination for capital maintenance. To perform these two functions simultaneously upon a historical cost basis, the assumption that the value of money as a measuring unit is unchangeable is required. This postulate of the unchangeable money value supports the logic of business accounting.

This postulate is not required in nonbusiness accounting situations, even if money is used as the measuring unit as is done in business accounting. The purpose of nonbusiness accounting is the clarification of the accountability of the entity and such simultaneous performance of money value accounting and money quantity accounting as in the case of business accounting is not necessary. In this sense, nonbusiness accounting is fundamentally different from business accounting.

In reality the value of money is always changing to some extent. Therefore, business accounting based on "the postulate of the unchangeable money value" can be generally accepted only under a certain economic condition that the value of money is stable in the long run despite its short run fluctuations. *Dollar* accounting and *Pound*

Sterling accounting to the time of the second World War were based on this type of economic condition.

Under conditions where the value of money is continuously declining in the long run with intermittent short waves of fluctuation, business accounting based on "the postulate of the unchangeable money value" may lose much of its logical foundation. Such economic conditions raise a serious question: Can business accounting still perform its two functions if based on historical cost data? Business accounting can clarify accountability based on historical cost even under this condition. But it can no longer account for the process of periodic income determination to maintain the capital as alternative fund. An almost one hundred year history of *Yen* accounting in Japan shows that *Yen* accounting is established on this latter type of economic condition.

CONFLICT OF THE ACCOUNTABILITY CLARIFYING FUNCTION AND THE INCOME DETERMINATION FUNCTION IN ACCOUNTING BASED ON HISTORICAL COST

As mentioned above, all accounting data must be kept at historical cost in each process of recording, measuring, and reporting, for business accounting to perform its accountability clarifying function for custodianship and administration of assets held in the business entity. However, in the case of the function of measuring income and ascertaining its sources under the condition of changing money value, the significance of measurement and reporting is lessened or nullified because the accounting data therein are caused to be heterogeneous by the ineffective measuring unit.

To perform its original functions even under the condition of changing money value, business accounting should be split into two fields according to function: one is the accounting for accountability clarification based on historical cost and the other is accounting for income determination. Money value adjustments are to be introduced into the latter field of accounting to homogenize all heterogeneous data caused by money value changes. The latter field of accounting then becomes a systematic method which enables a meaningful income determination based on homogeneous data. This is what we usually call *stabilized accounting, price-level adjustment accounting, uniform dollar accounting, or money value adjustment accounting.* Stabilized accounting should be based on adjusted historical cost data because it performs one of the two functions of the traditional accounting based on historical cost and it must keep an organic relation to the accounting which performs the other functions.

THE STRUCTURE OF ACCOUNTING FOR CHANGING MONEY VALUE AND ITS INFORMATIVE FUNCTION

As is mentioned above, the structure of business accounting based on the assumption that the value of money is constantly changing should be a coordinated system of historical cost accounting and adjusted cost accounting.

When we employ only traditional accounting which consistently uses historical cost data based on the assumption of an unchangeable money value, further interpretation of the periodic financial statements is required to identify the financial impacts of changes in value of money. In a period of rising prices, the traditional accounting data do not disclose adequate information on the following problems:

1. The amount of retained earnings necessary to maintain the same level of purchasing power as the original invested capital.
2. The insufficiency of working capital caused by inflation.
3. The maximum amount of disposable profits after keeping the same level of purchasing power of the original investment.
4. The possibility of raising wages.
5. Difficulties in precise financial statements analysis due to changes in the measuring unit.
6. Difficulties in the disclosure of earning power and financial position of the business at current price-levels as guidelines for investment decision making.
7. Presentation of basic data for social accounting.

These are minimum requirements for business accounting data in relation to the changes in value of money for accounting to perform adequately its informative function. Stabilized accounting techniques satisfied these requirements. The structure of business accounting procedures as a coordinated system of historical cost accounting and adjusted cost accounting may depend on the type and size of changes in value of money. Two types of structure of business accounting will be discussed under the cyclical and noncyclical condition of changes in value of money.

STRUCTURE OF BUSINESS ACCOUNTING UNDER CONDITIONS OF CYCLICAL CHANGES IN THE VALUE OF MONEY

In the situation of the cyclical change in value of money, where short waves of fluctuation tend to be leveled off in the long run, the total amount of income for a rather long period of such a cycle is the same either by historical cost accounting or by adjusted cost accounting

techniques if the total volume of the business remains the same within a cycle. Of course, the periodic income of each short period of time may be different under the two accounting systems: periodic incomes computed by historical cost accounting procedures fluctuate with the changes in price-level, but periodic incomes computed by adjusted cost accounting procedures may be smoothed.

Within the contemporary framework of traditional accounting based on historical cost (without money value adjustments), LIFO and accelerated depreciation methods are acceptable to determine taxable income. The reasons why income tax legislation allows these practices are that the total income by these methods does not differ from that of FIFO and regular depreciation methods under the condition of cyclical changes in money value and that the total taxable income does not differ either.

Furthermore, current prevailing custom does incorporate some profit smoothing policies, e.g., establishing a secret reserve under traditional income determination procedures using historical cost data. This type of manipulation is widely considered to be acceptable when the money value changes are small and cyclical.

The field of adjusted cost accounting may be substituted by the incorporation of profit-smoothing policies to some extent in the income determined for each period under the condition of cyclical changes in money value if the total amounts of income of both accounting systems are identical.

STRUCTURE OF BUSINESS ACCOUNTING UNDER CONDITIONS OF NONCYCLICAL CHANGES IN VALUE OF MONEY

Under economic conditions where the value of money continues to decline, the abilities of conventional accounting based on historical cost and adjusted cost accounting are quite different in relation to income measurement function, and a clear understanding of an organic relationship between both accounting structures is extremely significant.

Accounting data provided by conventional accounting based on historical costs are deficient in comparability over time in the continuing inflation situation. The difficulty of comparing accounting data is temporary and limited within a cycle of fluctuations of the cyclical changes in value of money, that is, it is a rather relative one. But this difficulty becomes absolute in the case of noncyclical changes in value of money. *Yen* accounting in Japan is an example of the latter case. It has generally been held, even by the Japanese people, that the value of the *Yen* in the domestic economy to the time of the second World War was very

stable compared to that of the postwar period. In fact, however, the value of the *Yen* was not stable enough to allow valid comparisons of financial statement data of a company over time. Considering a company established in the early Meiji era (about the last decades of the nineteenth century), for example, an attempt to compare accounting data of the company at fifteen-year intervals since its establishment will be largely useless.

There is no possibility for the manipulation of profit-smoothing techniques under the conditions of continuing inflation, even if such manipulation can be effective for the short run. In the case of a serious inflation of a noncyclical type, money may effectively fail its function to serve as a measuring unit. Under these circumstances, accounting for a going concern based on historical cost cannot but cease to exist. After recovery of the stability of the monetary unit, business accounting will begin again with a new amount of stated capital determined after the revaluation of assets of the business at current value. This is usually called "Fresh Start Accounting" and it has no relationship to the earlier accounting.

In other words, "Fresh Start" is the terminal station where business accounting for a going concern based on historical cost is destined under the conditions of noncyclical changes in value of money. The following two cases serve as examples of fresh start accounting: (1) Reconstruction of business accounting based on "Die Verordnung über Goldbilanzen" (November 30, 1923) in Germany after the first World War, and (2) reorganization of business accounting based on the "Gesetz über die Eröffnungsbilanz in Deutscher Mark und die Kapitalneufestsetzung: D-Mark-Bilanzegesetz" (June 21, 1948) in West Germany after the second World War.

COORDINATION OF ACCOUNTING BASED ON HISTORICAL COST ACCOUNTING AND ADJUSTED COST

One of the most difficult problems in developing a structure of accounting for changing money value is the coordination of the primary accounting function based on historical cost and the secondary accounting function based on money value adjusted cost. This problem is still unsolved by the several studies of accounting for changing money value. Most of the literature on accounting for changing money value has been concerned solely with the problems of capital maintenance and income determination, and the discussions have usually been limited to the problem of the selection of a measurement base: historical cost or

current cost. Thus, little or no light has been shed on a development of a structure of coordinating both accounting systems.

The author suggests (See Figure 1) to juxtapose two accounting systems: the maintenance of records at historical cost through all of the accounting processes (journal entries, ledger accounts, subsidiary books, and financial statements) for the primary accounting function and the adjustment of records by money value adjusted cost in ledger accounts and financial statements for the secondary accounting function.

The primary accounting function faithfully reflects all business transactions by means of recording economic events at historical cost and also allows a verification of records to records, and records to facts. In the primary accounting function financial statements are prepared based on the original recorded data to clarify the accountability of the business for the assets under conditions of changes in value of money. The secondary accounting function utilizes new ledger accounts by adjusting the historical cost records in the ledger accounts and preparing financial statements based on new adjusted records to measure and communicate the productivity of the business in terms of a homogenized measuring unit.[4]

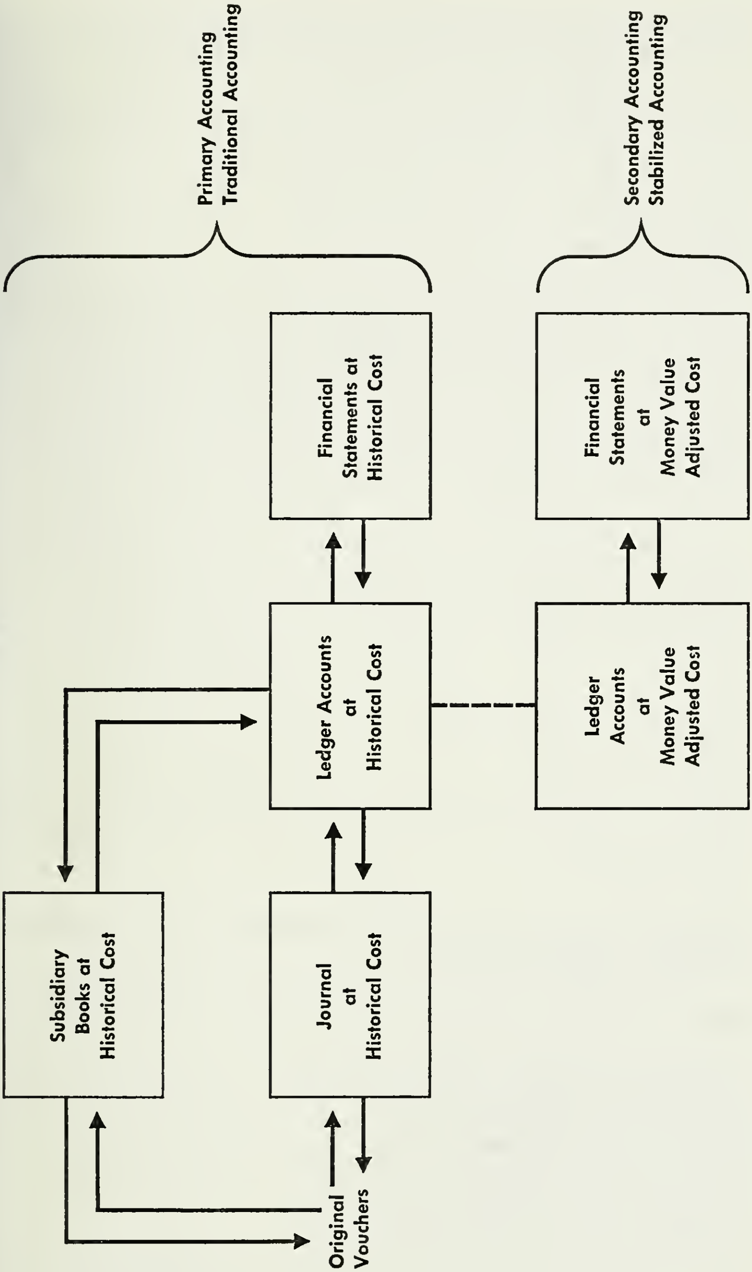
ACCOUNTING FOR CHANGING MONEY VALUE AS A SUPPORT OF THE GOING CONCERN ASSUMPTION

In business accounting theory based on the assumption of the unchangeable money value, the principle of the accurate reporting of periodic income is supported by the idea that the total income for the entire life of the business is equal to the sum of the all-inclusive periodic income reports of all accounting periods. This principle may be supported by the consistent use of historical cost as the measuring base for the entire life of the enterprise.

In reality, however, some financial policies supported by the doctrine of conservatism have been incorporated into accounting practices to solve those practical problems over which traditional accounting procedures have no control in the period of continuing, cyclical changes in value of money. Under conditions of noncyclical changes in value of money, there is no way other than to establish "a new accounting system based on historical cost" by abandoning "an old accounting system based on historical cost" after the recovery of stability of money value. No relationship can be found between the new and old accounting data

[4] Concerning the detailed procedures, extended explanations are given in this author's book, *Accounting for Changing Money Value* (Tokyo: Dobun-Kan, 1962), Chapter 8 (written in English).

Figure I


Primary Accounting
Traditional Accounting
Secondary Accounting
Stabilized Accounting
Original Vouchers
Subsidiary Books at Historical Cost
Journal at Historical Cost
Ledger Accounts at Historical Cost
Financial Statements at Historical Cost
Ledger Accounts at Money Value Adjusted Cost
Financial Statements at Money Value Adjusted Cost

although both accounting systems use historical cost as a measure based on the assumption of unchangeable money value.

If we establish business accounting as a coordinated system of primary accounting by historical cost and secondary accounting by adjusted cost based on an assumption that the value of money fluctuates, the new system will absorb any distortion of data in the periods of cyclical inflation or change between data in the period of noncyclical inflation which would have been incurred under the traditional accounting.

Even in periods of cyclical inflation, this new coordinated system of accounting will remove any distortion in accounting data based on historical cost by preventing the profit-smoothing policies for price-level changes from entering the field of traditional accounting on the one hand, and will follow the principle of the accurate reporting of periodic income that the sum total of the all-inclusive periodic incomes of all periods is equal to the total income of entire time on the other hand.

In the case where the value of money has been on the downhill, following a noncyclical pattern of changes, and then recovers stability, only the accounting based on historical cost may start from the records furnished by adjusted cost accounting at this point. Thus, a coordinated system of primary accounting and secondary accounting based on an assumption of the unchangeable value of money makes it possible to follow consistently the principle of the accurate reporting of periodic income that the total income of a going concern is equal to the sum total of the all-inclusive periodic incomes of all periods throughout the enterprise's history — before, during, and after the period of inflation — since the accounting data based on adjusted cost is adjusted from period to period.

THE TERMINATION OF ADJUSTED COST ACCOUNTING AT THE TIME CHANGES IN MONEY VALUE SETTLED DOWN

The necessary accounting treatment for a going concern when changes in money value calm down is to switch accounting methods based on an assumption of changing money value to those with an assumption of unchangeable money value. The point is to use the balance sheet prepared in accordance with the principles of adjusted cost accounting as the opening balance sheet at the time of switchover and to apply only historical cost accounting procedures thereafter. This would be carried out by the following steps:

1. To prepare: (a) a new inventory and (b) a new opening balance sheet based on the account records kept at adjusted cost at the time of switchover in the secondary accounting system.

2. To close all accounts of the general ledger in the primary accounting system and to open new ledger accounts based on a new opening balance sheet.
3. To write up or down all items in the subsidiary records in the primary accounting system based on the new inventory.
4. To close all records of adjusted cost accounting in the secondary accounting system.

This treatment will have the following effect on business accounting:

1. After the stabilization of money value, accounting data can be compared between periods or businesses, and by the use of a free exchange rate, can also be compared or consolidated with those of a business in another country having stable currency.
2. After the stabilization of money value, accounting data can be compared and made consistent with those prior to money value changes by a reverse adjustment of the former to base value by the index number as of the date of the switchover.
3. After the stabilization of money value, accounting data can be compared and made consistent with data at any particular point of time during the period of money value changes by a reverse adjustment of the former to the money value at such particular point of time by the index number as of the date of the switchover.

Concerning the change from old accounting data to new accounting data at the terminating point of the money value fluctuation, we should note that the accounting data in an opening balance sheet do not reflect market value but acquisition cost for the business expressed in terms of current value of money at the point of the change. In other words, these accounting procedures are taken to keep distortions, which are caused by heterogeneous measuring units during the period of money value fluctuations, from being incorporated into the new accounting records. The revaluation of new balance sheet items at market value at the point of the change is quite another problem.

THE ACCOUNTING NATURE OF THE INDEX FOR MONEY VALUE ADJUSTMENT

The comparability and convertibility of accounting data expressed in money amounts should be interpreted in the sense that accounting data in the sphere of one currency must be comparable and convertible in terms of a homogeneous unit with not only those in the sphere of the same currency but also those in the sphere of another currency by the use of an appropriate exchange rate. This can be established as an institution in a monetary economy. It should be understood, therefore, that the so-called accounting postulate of the unchangeable money

value presupposes an economic condition which makes possible homogeneous value calculations in the sphere of the same currency as well as between spheres of different currencies.

From the theoretical viewpoint, the application of stabilized accounting or price level adjustment accounting procedures to two or more countries of different currencies requires that accounting data based on adjusted cost accounting in one country be converted homogeneously to those of other currency spheres through adequate exchange rates. Thus, the most fundamental requirement for an index for money value adjustment is the international homogeneity as a measuring unit.

When a completely free rate of foreign exchange exists, accounting problems caused by fluctuations in the value of money can be solved by taking into account only those fluctuations in one country. Under the administrative exchange rate system, which is the practice in the present international economy, however, the mere adjustment for the price-level changes in a domestic economy would leave unsolved the problems of the international comparison and consolidation of accounting data.

What the author has emphasized above is exemplified by some actual cases. During the second World War, a Japanese company, with its home office in Japan, under creeping inflation, and a significant branch in Shanghai, China, under the condition of vicious inflation, was driven into a corner because it could not combine the accounting data between home office and branch by use of the fixed exchange rate between *Yen* and *Yuan*. Another typical example is that American parent companies in preparing consolidated statements, generally exclude subsidiaries in Brazil, where vicious inflation is now going on.

The way to solve the problem is to approach from the international viewpoint of "accounting for changing money value," instead of from the domestic viewpoint of "accounting for price-level changes." At the Eighth International Congress of Accountants in 1962, the significance of the new function of accounting as an "international economic language" was emphasized under the subject "world economy and accounting" to promote further prosperity in the free world. The essential requisite for accounting to serve as an "international economic language" is the establishment of accounting for changing money value in each country based on a logical international index for money value adjustment. This is one of the most essential problems in the development of international accounting. It may be a difficult task, but may prove to be solvable through the cooperation of all accountants in the world in the near future.

The Direction of Accounting Education

R. K. MAUTZ*

It is reasonable to expect that the educational doctrines which yesterday made accountancy into a suitable university subject, could tomorrow continue to justify accounting instruction at all university levels. Yet accounting teachers will always have to face doubts, questioning, criticism — their own and that of others. Education for business has travelled a long road full of such hills and valleys on the way to recognition as a university field; no subject in the Commerce curriculum has had a harder time to gain full acceptance than accountancy. Early criticisms intimated that "clerical methodologies" could hardly be considered suitable for university classes. Here and there the conception will probably continue for a long time that accounting must necessarily be clerical bookkeeping spread thinly over the curriculum. Such is the momentum — or is it inertia — of early misconceptions.

A. C. Littleton — 1950

In the mid 1960's university education in accountancy appears ambivalent, confused, and unsettled. Extremist claims for its role, or lack of one, in the economy, wide-ranging activities of professional practitioners, and sharp criticisms both from within and without the accounting fraternity leave the educator in doubt concerning the scope and nature of his field. Accountancy in the business school is accepted as making at least some essential contribution to a general education for business; at the same time a strong emphasis in introductory courses on accounting procedure and the preparation for the practice of accounting disturbs our colleagues in the business school.

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Accounting graduates seek employment in a variety of career fields, still we have not yet found a way, nor have we even established the desirability, of incorporating in our programs any substantial degree of specialization in subdivisions of the general field of accountancy.

The introduction of other quantitative methodologies into the information systems of business enterprises has for the first time presented accounting with serious competition, and the combination of data processing by the computer and decision data supplied by operation research techniques has led some to foresee a quick end to the usefulness of orthodox accounting. Concurrently, tendencies in the professional practice of public accounting to expand into new areas of management services have not only opened the question of professional boundaries but have serious implications for the breadth of education necessary for public practice and appear to challenge the traditional approach to preparation for the profession.

The response of accounting educators — and other accountants as well — to these developments has tended to be expansionist. We must reach out and include all these new ideas lest accountancy finds itself of little importance as other information devices become more useful. Some argue that if we do not make ourselves competent in the entire subject of data development, accumulation, processing, and reporting, accountants will soon find ourselves obsolete and without opportunity or usefulness. Perhaps this is the appropriate solution. But to do so blindly without seeking some rationalization other than fear and self-interest has little appeal. The desirability of establishing and adopting a point of view, a philosophy, if you will, for accounting education is evident. What is the current state of our subject? What is its applicability? How can we best meet the educational needs of society?

Advances in University Education in Accountancy

Professor Littleton has noted that the earliest instruction in accountancy in this country tended to emphasize clerical detail.

> For example, when I began teaching, the courses in elementary accounting in most schools dealt with clerical bookkeeping — a multitude of purchase invoices, psuedo paper money, imitation bank checks, etc. That approach could not survive in a university atmosphere.

The introduction of transaction analysis as the foundation for recordkeeping rather than rote memorization of rules and the use of complex and sophisticated problems to develop analytical ability did much to raise accounting courses to a desirable level. Professor Littleton commented that: "The instincts of college teachers led them to favor

problem textbooks to stimulate practice in thinking in place of practice sets to provide exercise in bookkeeping routines."

Later, efforts were made to introduce accounting theory, that is, explanatory material concerning the reasons for and against accounting practices, at lower and lower levels of instruction until even introductory courses stressed reasons as well as approved methods of reasoning. This represented progress, of course; theory, however, presents problems. Some minds are repelled by it, finding abstract thinking unfamiliar and unappealing; others find it so appealing that they demand even more.

Critical and competent students were not long in detecting the difficulties in the problem textbook approach. Too often, problems were solved on a precedent basis, the way problems had been solved before, without consideration of why the original problem solution had been accepted as sound. Too often, problem solution required little more than the application of standardized procedures to new sets of facts. Undoubtedly helpful in developing analytical abilities and in teaching orderly thought processes, the problem approach as applied in many accounting courses did little to encourage innovation and imagination. Neither did it provide much assistance in meeting problems of a type not previously dealt with. In short, this pedagogical approach trained the mind but did not enlarge it.

Additional advances in accounting education, therefore, appear desirable, and a variety of signs indicate that such advances are not only possible but are almost certain to appear in the immediate future. What is the nature of those advances? What influence will they have on our educational practices?

Accounting as a Discipline. Before attempting answers to such questions, some considerations of the status of accounting as a subject of study are in order. What has happened to accounting in recent years? What is the status of its literature? Does it show signs of attaining the rank of a mature intellectual discipline?

Accountancy appears to be many things to many people: a control mechanism, an information system, "the art of recording, classifying, and summarizing in a significant manner and in terms of money, transactions and events which are, in part at least, of a financial character, and interpreting the results thereof." Accountancy is all of these and more.

As a subject of study, accounting has changed remarkably in the last several decades. Its range of usefulness has been increased, its literature has expanded in quantity and improved in quality, but more

important than either of these, accountants have learned to view themselves, their work, and the body of knowledge that is accounting in new ways. Significant success has been attained in attempts to organize accounting knowledge in the traditional structure of a body of thought as concepts, postulates, principles, and practices. Some attempts have been primitive; others more sophisticated. All have helped to bring accounting to the point where it can fairly be said to be emerging as an intellectual discipline with a definable subject and discernible boundaries. Accountancy has established itself as the primary analytical discipline concerned with the progress and status of enterprises which engage in business transactions.

Conceptual Foundation. Accountancy is a discipline because it has developed essential concepts, well formed at this stage in its development, which permit it to analyze, organize, and display in a rational manner great masses of raw data. That accountancy is analytical is indicated by the nature of its concepts and the use to which they are put in providing a basis for the classification and reclassification of data until the kind and extent of enterprise progress become apparent and the status of the concern is established. Accountancy has learned that its essential concepts are based upon postulates and are productive of propositions quite properly called principles which provide the direction and reasons for action in processing the great mass of enterprise transaction data from which reports of progress and status must be drawn.

Accountancy must be described as a synthesized discipline for the reason that it is based upon, and often borrows from, other disciplines. For example, its concepts of invested capital and retained earnings at least partially rely on legal notions; its concept of net income is closely related to, but not the same as, economic income. Assumptions respecting the behavior of people in organizations lie at the root of its concept of internal control. The economic concept of marginal analysis is utilized to present cost-volume-profit relationships. Additional illustrations are easily found.

But accounting is not merely a collection of concepts borrowed wholesale from other subjects; many of the notions of other fields require modification before they are of much use in accounting, a fact accountants have been too long in discovering. The economic concept of income relates basically to the individual human being and the amount he can spend over a given period and be in the same economic position at the end of the period as he was at its beginning. In attempting to apply this highly personal concept of income to the impersonal

business enterprise, accountants have had more than a little difficulty. Only as the economic concept is modified to suit the new application does it prove fully useful. In much the same way, the concept of assets is related to, but not identical with, the economic concept of wealth. To cite other illustrations, the concept of a liability is founded in the law, but as used in accounting includes more than legal claims; evidential matter, a key concept in auditing, is essentially an idea borrowed from logic but one requiring adaptation to the audit situation.

And as a true discipline, accounting has developed concepts of its own. The matching concept, a sub-concept of a broader one calling for the interpretive association of related data, is indigenous to accountancy. Realization, full disclosure, financial condition, and results of operations exemplify other concepts peculiar to accountancy.

Technical Sophistication

The adaptation and development of strong concepts have been of primary importance in the emergence of accountancy as a discipline. There are, however, other characteristics which identify accounting as a discipline. Accounting is also a discipline in the sense that it includes a sophisticated and refined technique. Here again, accountancy has not hesitated to borrow from others. Its double-entry method of analysis is peculiarly its own, but it readily adapts statistical and mathematical methods to its own purposes in sampling and linear programming, in financial statement preparation, and in ratio analysis. Other techniques peculiar to accounting might include funds analysis, consolidated financial statement practice, cash forecasting, and budgeting.

Underlying Business Knowledge

Accounting, therefore, is an analytical discipline relying on established concepts and utilizing sophisticated techniques. Yet another ingredient must be mentioned if for no other reason than its importance to accounting education. To apply the concepts of accounting and to utilize its techniques effectively, one must possess a considerable knowledge of business, its environment, purpose, organization, and methods. The intimate relationship between accountancy and business activity is such that neither is complete without the other. To those who object on the grounds that accounting is useful to many non-business types of enterprise, one must reply that, even for such enterprises, it is the business activities, the business transactions, the reporting of status and progress resulting from such transactions and activities that provide the opportunity for accounting to be of service to non-business enterprises as well as to business firms.

So that the point is clear, those aspects of the progress and status of business enterprises, typically described in the familiar terms "results of operations" and "financial condition," are accounting concepts. No other discipline treats them as exhaustively, as effectively, or in quite the same manner as accounting. Accounting reports of progress and status are used by others for a variety of objectives: internally, for managerial control purposes and investment decisions; externally, in the financial market for social control through investment decisions of a different order, by regulatory and taxing bodies, and by those who would "account" for the economy of which the given enterprise is a part. Not surprisingly, some users find the accounting determinations more useful than others. Yet the concepts on which accounting reports are based are accounting concepts of vital importance to all users of accounting data. Supporting the major concepts are many subconcepts which likewise require understanding if the reports prepared by accountants are to be understood.

Conceptual Knowledge Fundamental

The techniques by which accountants collect, process, and report data are of relatively less importance than are the concepts. The concepts constitute the basic analytical essentials, the means by which reason and order are brought out of the mass of raw transaction data. Techniques enable accountants to be more efficient in processing data, but upon the concepts rest the entire analytical and reporting process. Thus one might well contend that an understanding of the essential concepts makes one an accountant whatever techniques or methodologies he uses to process the data — or whether he has anything or not to do with data processing. On the other hand, one who processes data by rule or under direct supervision and fails to comprehend the significance of what he does can scarcely be described appropriately as an accountant. One may cut and sew without being a surgeon; one may tabulate business data without being an accountant. At the other extreme, a surgeon may use a laser beam rather than a scalpel and still be a surgeon; an accountant may employ a computer or use matrix bookkeeping techniques rather than more traditional journals and ledgers but this makes him none the less an accountant.

Relationship to Accounting Practice

One should not expect a one-to-one relationship between any intellectual discipline and its employment in practice. For research and educational purposes, a discipline must be organized and presented so

as to foster its best development and application in the long run. Practitioners must employ what they know of the discipline in the immediate present to solve pressing problems of the moment, frequently under extraneous pressures of various kinds. If a discipline is at all fundamental, it will have a variety of applications just as accounting does in internal management, in the investment market, in regulation and control, in taxation, and in personal planning. Some of these applications will use more of the knowledge included in the discipline than will others. Some practitioners will also in their practice use concepts and techniques of other disciplines. Thus a tax expert may, in the solution of a given problem, have recourse to accounting, legal, economic, and other concepts, and perhaps use a combination of technical procedures based on all the disciplines involved.

This suggests that there may be a variety of educational routes to the practice of any discipline, including accountancy. As the discipline underlying some phase of professional practice becomes better organized and its components more apparent, it lends itself more readily to institutionalized presentation, and the universities become better able to present it more economically and effectively than can individual practitioners on the job. Accountancy education has already moved from the apprenticeship, on-the-job type of training, to university status. It is destined to become more securely established and more effectively presented in university programs as we are successful in identifying and delineating its essential concepts more clearly and as we accurately relate these to postulates and extrapolate principles from them. Yet much of professional practice in any field relies on the direct personal experience of the practitioner. This the classroom can approach but never equal. Competence as a practitioner requires both the ability to think in abstract terms and to solve concrete problems. The best practitioners are those who recognize in their daily problems the application of essential concepts and are aware of the instances in which accepted concepts appear inadequate to meet the problem. An example of such an inadequacy is found in the apparent failure of the traditional concept of liabilities to meet the problem of reporting long term leases in financial statements.

There must be a constant interplay between the active practitioner and the teacher or researcher in the underlying discipline. It is from practice that the challenges to theory come. Practice puts theory to the test, often straining it beyond its ability as times, conditions, and transactions change. Yet theory also tests practice by holding it to account

for the treatments it accords like and unlike items. Practice must meet the tests of reason, of logic, of equity, and a major purpose of theory is to note and to criticize any failures to do so. As practice and theory in accounting acquire more mutual respect, as they learn to exchange ideas, and as they develop a continuing dialogue, each will prosper and those who benefit from the effective use of accounting data will prosper the most.

Public Accountancy

Public accounting, as a field of professional practice, differs substantially from other applications of the discipline. As an independent contractor, the practicing CPA finds his loyalties and responsibilities lodged in units different from those of the internal accountant. Certainly all accountants are expected to have respect for truth and to feel a responsibility to those who use their reports, no matter how these are prepared. Thus each accountant has personal standards of behavior which reflect his attitudes toward others and which must, to some extent, be influenced by his education and background. He will also have standards enforced upon him by society, although it is hoped that his personal standards will far exceed the minimums expected by society. As an officer or employee of an enterprise of some kind, he will feel responsibilities, have loyalties, and thus establish standards of behavior in respect to his company also. It is here that the independent CPA finds himself in a different position. He will have loyalties and responsibilities not only to his own firm but also to the clients who call for his services. These may well present conflicting interests and because of the difficulties involved in balancing such potentially conflicting loyalties, much thought and energy have been spent in the development of a code of professional conduct. Even beyond this, however, his acceptance by society as an independent expert places additional social responsibilities upon the public accountant which are not infrequently translated into legal obligations.

Thus the independent CPA works in an environment of ethical and legal responsibilities, the importance of which can scarcely be overstated. At every stage of his work, from his own firm's organization and training efforts to his conduct in the client's office, and the wording of his opinion, he is strongly influenced by the burdens he bears.

The operating structure of the profession of public accounting seems to be unique among professions in this country and appears to be growing even more so. No other profession has such huge professional firms nor such huge engagements. No other profession relies so greatly upon

the work of those who have not yet been accorded full professional status as do the partners in public accounting firms in relying upon staff assistants. No other profession has such a difficult time in determining just exactly when an individual attains full professional status. No other profession acknowledges the importance of identifying its "standards" and "principles" for all to see in quite the same way that accountants now accept that obligation.

All of these factors help differentiate the practice of public accounting significantly from the practice of accounting in any other application. Has accounting education given explicit consideration to such factors? Have we developed educational programs and educational materials that provide an appropriate awareness of these matters in the minds of candidates for the profession? Does the accounting graduate have any insight into the way practicing members, academic members, and the professional staff of the major professional organizations interact in furthering the aims of the organized profession? In short, has accounting education provided effective pre-professional training? One can make a strong case that true professional education for public accounting has been a neglected part of university programs, generally.

IMPLICATIONS FOR ACCOUNTING EDUCATION

That the arguments presented in the foregoing paragraphs, if valid, have implications for accounting education seems a reasonable proposition. Before inquiring into those implications, however, it may be well to summarize the essence of the preceding arguments as these provide the support for the educational recommendations that follow.

1. Accounting is emerging as the primary analytical discipline concerned with the progress and status of enterprises which engage in business transactions.
2. Accountancy is a discipline because it has developed and continues to refine a body of concepts which permit the analysis, organization, and rational reporting of the great mass of data which result from enterprise activities.
3. Rational utilization of accounting data requires an understanding of accounting concepts which in turn requires some comprehension of business organization and operation.
4. The application of accounting concepts for analytical purposes in the real world requires (a) a substantial understanding of business organization and operation, and (b) proficiency with those techniques and procedures found to be most effective and economical for data processing purposes.

5. Accountancy is a widely applicable discipline finding usefulness for a variety of purposes within and external to enterprises; it is employed for personal and public purposes, and is practiced by enterprise employees and independent practitioners.
6. The profession of public accountancy is practiced in an ethical-legal environment and within a structural framework that makes demands upon its practitioners not borne by other accountants.

These arguments appear to lead almost directly to the following propositions respecting university education for accountancy.

1. As an intellectual discipline, accountancy has a deserved place in the academic world.
2. Because of its reliance on ideas from other disciplines, foundation courses in those disciplines (economics, mathematics, logic, law, behavioral science, *et al.*) appear essential as prerequisites to advanced work in accountancy.
3. Because of the intimate interrelationship between accountancy and business, a substantial attention to business courses is an essential.
4. Because the subject matter of accountancy is now large and increasing and because even those concepts and techniques borrowed from the other fields often require substantial modification, a significant portion of the educational program must be reserved for accountancy courses.
5. Because accounting applications to real world problems demand both conceptual understanding and technical skill, attention to both is required.
6. Because accountancy courses are taken by students with varying career interests, and because it is pedagogically sound to do so, introductory courses should emphasize (a) a broad conceptual understanding, and (b) the general analytical techniques of interest to all who use accounting. More specialized concepts and techniques should be reserved for advanced courses designed particularly for students intending to practice accountancy.
7. Because the practice of public accountancy as a profession differs from other applications of the discipline, special attention to professional needs and requirements is justified for those who indicate an interest in public accountancy.

One might be rash to describe these few thoughts as a "philosophy of education for accountancy." At best they attempt to take cognizance of changes which have already occurred or which appear to be unavoidable outcomes of present tendencies. They do, however, suggest the directions which I feel education for accountancy must take if we are to meet today's needs and to prepare for the future.

The Concept of a Business Asset

HANS KRASENSKY*

A basic concept of property is essential to the development of the concept of a business asset. Property may consist of a single object or of many individual objects. If business property alone is considered for purposes of financial reporting and income taxation one must carefully distinguish between the economic and non-economic activity of *man*. Thus, we find two distinct groups of property: private property and business property. Whenever such a division is made, a problem arises when the liability of the individual proprietor is considered. Since the individual proprietor is not only liable to the extent of his businesss property, but his private property as well, he should add a supplementary financial statement, which summarizes his private property, to his business financial statements. The inclusion of both private and business property in a single set of balance sheets and income statements might be a sound course of action.[1]

An example of such a total balance sheet is on page 48.

Generally, accountants and other members of the business community are concerned with economic property. This is evidenced by the fact that the income of such property is taxed. Taxable income may consist of many different types of incomes. A problem arises, however, be-

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[1] A. C. Littleton and V. K. Zimmerman in *Accounting Theory: Continuity and Change* (Englewood Cliffs, N. J.: Prentice Hall, Inc., 1962) indicates that early businessmen were asked to prepare a list of business assets, liabilities, and net worth, augmented by a report on personal and residential property possessed.

bargained amount. With these bargained prices, business assets become analytically manageable magnitudes, and it is this which enables us to include them in a financial reporting. Accounting, and the concept of common acceptance of the nature of business assets to be included in financial statements, gradually evolved in the course of history. Initially, only tangible goods and legal relationships were reported in the financial statements. In time, intangible assets were also included; finally, economic relationships were included in modern financial reports. Common acceptance plays a particularly important role in the question of the valuation of a firm as a viable unit.

The reader may now justifiably expect a definition of the concept of a business asset. We know that business assets are individual units of an enterprise which, according to usage and acceptance, are the objects of economic exchange. Since usages vary, according to time and location, this definition is not very useful. We should, therefore, follow the method of noting certain characteristics and enumerating certain central qualities. The need for such an approach is justified as no definition is given in the Commercial Code or in the legislative stipulators concerning financial reporting; nor is a definition to be found in the tax regulations. The reason for this absence of a legal definition lies not only in the principle of conservatism, the idea of not committing oneself too firmly, but also in an awareness that pure logic and analysis cannot do justice to the manifold aspects of the realities of modern commercial life.

The Commercial Code, for example, quite superficially identifies only merchandise receivables and payables as business assets.[2] The Income Tax Code also notes only a few asset items which may be classified as business assets. The broadest framework is found in the Companies Act, which notes in its model balance sheet, properly classified, a number of common business assets without, however, giving an exhaustive listing. In many instances, it is necessary to rely on the income statement and the valuation requirements.[3] Finally, there are also some business assets which must necessarily be noted in a supplementary report.

To complete the challenging concept of a business asset, we shall now utilize both a positive and a negative method.

[2] *Commercial Law Code* (*Handelsgesetzbuch*), Austria (May 6, 1897), sec. 39 and 40.

[3] *Federal Law* (*Bundesgesetz*), Austria (March 31, 1965), BGB1. Nr. 98 (Company Act of 1965), secs. 130-33.

A. The positive definition

According to business practice, business assets include all items subject to economic exchange, such as:

1. Tangible business assets such as land, buildings, machines, and merchandise.
2. Rights and obligations of all time lengths in the narrow sense.
3. Intangible assets of all types, and rights and obligations in the broader sense, such as patents, franchises, and trade marks.
4. Economic relationships such as patented inventions, secret processes, exclusive marketing rights, business and production secrets, formulas, purchased agreements not to compete, and the subscribers for a magazine.

B. The negative definition

According to the current view, all properties and relationships, which, according to business practice, cannot be independently valued are not to be considered as business assets. Examples of these are:

1. The personal rights of an individual.
2. The managerial ability of the enterprise.
3. The environment of a free market economy.
4. The economic advantage arising from the elimination of incompetent partners or employees.

These examples reveal the difficulty in defining the concept of a business asset. Actually, any economic advantage or disadvantage which can be clearly recognized, judged, and independently valued may be considered as a reportable business asset. As a further aid in the definition of this concept, we should mention the economic viewpoint. More percisely, especially concerning matters of financial reporting, one should consider the business economics viewpoint. This viewpoint is neither legal nor technological. The concept of a business asset is not a legal concept. It is neither the legal relationships nor the legal facts which are the object of accounting and financial reporting; instead the objects are simply business economic events. The fact that all these events will have some legal form is irrelevant. The inner core of the event is an economic one, and accounting and reporting must relate to it. We are not, therefore, dealing with a concept of a thing or with the concept of ownership, nor with the concept of contracts, whether in the context of the Civil or the Commercial Code; we are dealing with the economic content inherent in these legal forms. The viewpoint of

business practice is decisive in determining if something is to be regarded as a business asset or not.

It is also impossible to approach the concept of a business asset from a technological point of view. It does not involve processes of a "natural science" nature in the sense of chemical or physical processes. Rather, economic processes are involved. The economy is not a system of quantitative material relationships. Only when it is capable of satisfying the economic needs of an economic subject will an item or relationship have value. The asset concept of the balance sheet, therefore, can neither be interpreted legally nor technologically, but must be interpreted only from an economic viewpoint.

The Principle of Commitment

The discussion thus far demonstrates difficulty of determining whether an economic good belongs to the firm's assets or not. Since each thing may be part of either a firm's property or an individual's personal property, it obviously becomes a question of the dedication of the item, i.e., the businessman must determine whether a particular good belongs to his sphere of economic activity or not. Items outside his economic sphere may not be properly included in the business balance sheet. They are also not considered economic goods by the income tax regulations. The income tax return considers only business assets because the law intends to tax only business profits. It is for this reason that the commitment of a business asset is often of extreme importance. Only through its commitment does an item or a relationship become a business asset in the sense of the Commercial Code and the Income Tax Regulations. To illustrate this, we can briefly examine the requirements concerning the price structure for government contract components. Of all the costs which are part of contracted total price structure, we are particularly interested in the imputed amount for interest and the premium for risk. These are imputed items which in Austria and Germany may actually be added to the price for governmental contracts. They are based on the minimum operating capital, and for a full understanding, the latter term should be defined.

The Calculation of the Minimum Operating Capital

The following abbreviated example illustrates the concept and method of calculation of minimum operating capital.

We can, therefore, consider minimum operating capital as neither the total equity of an enterprise nor the owner's equity. The calculation process is as follows: The total assets are reduced by temporary invest-

Exhibit 2. Calculation of the Minimum Operating Capital

For the calculation of the minimum operating capital, the following brief example is given.

Balance Sheet

Cash	$ 3,000		Trade payables	$20,000	$20,000
Merchandise	32,000		Bank loans	15,000	
Securities	2,000	$ 2,000	Net assets	57,000	
Investments	7,000				
Machines	13,000				
Plant	20,000				
Apartment building	15,000	15,000			
	$92,000	$17,000		$92,000	$20,000

Assets	$92,000
Less: Securities	2,000
Less: Apartment building	15,000
Minimum necessary assets	75,000
Less: Non-interest bearing supplier advances	20,000
Minimum operating capital	$55,000
The imputed interest (6½%), including a risk factor equals	$3,575

ments and the apartment building since both are not directly related to the economic purpose of the enterprise. It should be noted that the normally smaller items which are created temporarily, such as cash or other reserve funds, would not need to be excluded. Investments must be deducted whenever they represent commitments in enterprises belonging to different fields of economic activity. After deducting these non-related assets, we obtain the minimum operating assets. The enterprise, however, also utilizes an interest-free source of credit from suppliers which, in contrast to any bank loan, must be deducted. Only then does one obtain the minimum operating capital from which, as our example indicates, the imputed interest is calculated at 4 percent and the risk premium at 2½ percent. Therefore, a total of 6½ percent may be included in the price for governmental contracts.

THE CONCEPT OF A BUSINESS ASSET INCLUDABLE IN FINANCIAL REPORTING

After these general remarks, the determination of those circumstances in which a general economic good becomes an accountable business asset shall be discussed. In many instances the terminology of income tax regulations simply accepts the terminology of accounting and business economics.

Formal Requirements for Inclusion in the Financial Reports

This formal requirement for the inclusion of business assets in a balance sheet stems from their inclusion in the accounts and their treatment on the basis of generally accounting principles.

In general, the inclusion of an asset in the financial reports is based on three conditions:

1. Accountability in the sense that the item can be included in the body of the balance sheet as an asset with a corresponding equity claim. This will simultaneously affect the income account and statement of financial position. This point represents accountability in the strictest sense.
2. Accountability in the sense of disclosure through notes (contra items) within the balance sheet or as footnote explanations. This type of disclosure does not affect the results of operations or the financial position. In this connection, one should also refer to the legal-required supplementary reports, particularly for banks.
3. Accountability in the sense of inclusion in the general supplement. This disclosure also has no effect on the financial position or operational results.[4]

Financial Report Supplements

Special prescribed statements are required for banks.[5] These legal requirements of the Credit Institutions Law (*Kredit wesensgesetz. KWG*) demand certain disclosures in the information supplement attached to the financial statements, which attempts to explain certain balance sheet items. These disclosures are normally placed at the bottom of the statement.

On the asset side, the following types of information are required where appropriate:

A. Receivables from affiliates.
B. Receivables from employees.

[4] Littleton and Zimmerman, *op. cit.*, pp. 178ff.
[5] See the above regulations for the model financial statements of Credit Institutions of October 10, 1939, BGB1. 211/39 I, p. 2,079.

C. Fixed assets, Section 17, Subsection 1, *KGW*.
D. Fixed assets, Section 17, Subsection 2, *KGW*.

On the equities side, the following points are to be reported:

A. Accommodations and rights and claims from endorsements.
B. Payables to affiliates.
C. Total liabilities, Section 11, Subsection 1, *KWG*.
D. Total liabilities, Section 16, Subsection 1, *KWG*.
E. Total liable owners equity, Section 11, Subsection 2, *KWG*.
F. In the case of partnerships, unencumbered property of the partners.
G. In the case of savings banks, liability increase through liability of guaranteeing association.

Disclosure of these items facilitates the calculation of legally required liquidity and coverage ratios by outsiders, and it is also an important source of information for the public.

Material Accountability

Though the formal prerequisites of accountability have been discussed, nothing has yet been said about the nature of individual balance sheet items. The question of whether a liability or an asset is involved must be decided. Here one must consider each transaction as a separate, independent entity. Everything that belongs to a particular transaction must also be viewed in its inherent duality and this duality must be considered for balance sheet purposes. Thus, we frequently discover that receivables and payables are created simultaneously and their inclusion in the balance sheet as assets and liabilities must also be done simultaneously. This is particularly true for pending transactions such as contracts to purchase and contracts to sell and in situations involving guarantees and accommodations. The special situation of reporting leases is also involved here. Both the present cash value of all liabilities arising from lease contracts and the value of the right to use the object being leased should be disclosed. As in the case of liabilities arising from endorsements, it may well be that the liability amount exceeds the corresponding receivable.

This form not only influences the extent of the balance sheet but also the accounting results. Here the question arises whether the accountant is committed to strict rules of financial reporting or to what extent he has freedom in terms of reporting. On the one hand, we have an obligation to exclude certain items from the balance sheet, and, on the other hand, we have an obligation to include certain items. In both

theory and practice it is, therefore, very important to determine quite definitely when one has an obligation to include items. We know that the freedom of inclusion or exclusion is greater for commercial balance sheets than for income tax returns. On the other hand, however, the income tax return (or the income tax balance sheet as it is often designated) may grant freedoms in areas that do not exist for commercial balance sheets, such as the area of depreciation.

Our question, therefore, leads to an investigation of the significance of the recording of assets and liabilities. The recording of an asset indicates that an enterprise asset is added which in turn temporarily increases the net worth for the present period. This simultaneously leads to an increase in the income tax liability of the current period and, if we disregard all other effects, it also means a tax reduction for some future accounting period. The recording of a liability indicates that a payable is added to the balance sheet which in turn results in a reduction of the net worth during the current period. As a result, this causes a current tax reduction and a future tax increase. One can see, therefore, that these balance sheet activities have side effects on the tax liability and these frequently are the most important considerations for an enterprise. At the same time, however, this style of analysis clearly indicates that the accounting recognition of liabilities and assets has a two-fold effect. The dispute whether to record an asset or a liability is, therefore, one that unavoidably involves the shifting of the incidence of income from the present to the future or the reverse. The recordings of assets, therefore, does not automatically mean a tax liability increase just as the recording of a liability does not necessarily imply a reduction of the tax payable. For the firm is not always interested in minimizing assets and in maximizing liabilities. Particularly the fiscal years in which losses are incurred or in which profits are very small, the income tax is of no great importance. On the other hand, in years of high profits, the high progressive income tax rates become extremely decisive in the area of enterprise decisions. Therefore, a firm will strive to capitalize as many assets as possible in loss years to obtain a basis for increased depreciation and other revenue deductions in profitable years. Viewed in this manner, the recording of assets and liabilities becomes a principal avenue of the financial reporting policy.[6] Particularly for

[6] "Apparently the earlier treatment was based on the belief that a specific asset generated a loss or gain. Now we explain enterprise loss or gain as influenced by market conditions, by acceptance of goods by a customer, by managerial judgment in selecting the goods, by skill in attracting customers, and so on. After a good deal of discussion in private and in the current literature, two ideas of disclosure developed: (1) that surplus should be classified in the balance

reasons of financial statement policy, therefore, the theoretically correct treatment of a problem of capitalization or the creating of a liability will often not be followed because financial interests predominate.

The Static and the Dynamic Balance Sheet Theories

The question arises whether the balance sheet should disclose financial position or income. This problem is well known in accounting literature, and the accompanying debate has culminated in the contrasting views of the so-called static and dynamic balance sheets. In current income tax accounting theory, the dynamic viewpoint is becoming more and more prevalent. Starting from these considerations, therefore, the concept of the individual business asset that is to be included in the balance sheet should be understood from a cost theory viewpoint. The tax asset concept should be understood as a method to allocate costs to different periods. Viewed thus, these "frozen" costs become business assets. This classical expression by Schmallenbach becomes understandable when he notes that the balance sheet is but a storage place for costs. Balance sheet items should be viewed as residuals of those receipts and expenditures which, after proper periodic recording, will not enter the profit and loss account of the particular period and which are, therefore, shown on the balance sheet. This practice, in effect, stores them to enter the profit and loss account of later periods. Thus the contrast to the static viewpoint, which still predominates our commercial law codes, is increasingly recognized and becomes more and more subject to question. According to this static concept, business assets are items that exist by themselves independent of the profit and loss account and are taken into the balance sheet independent of the profit and loss account. The static concept of an economic business asset, therefore, represents the individualized concept of balance sheet assets. This concept is determining in the cases where the firm no longer is a going concern or where the enterprise is being dissolved. The listing of assets and liabilities as of a certain day may be called a report of "status."[7]

If the balance sheet is to show the correct financial position for fair

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sheet to report separately appraisal, paid-in, and earned surplus; and (2) that data about current earnings and changes in surplus should be reported in a combined income and surplus statement. Contemporary inventory accounting, fixed assets amortization and cost accounting are all modern features of an evolving technique to apportion a stream of inflowing costs between current and future periods." Littleton and Zimmerman, *op. cit.*, pp. 60, 100, and 147.

[7] A. C. Littleton, *Structure of Accounting Theory* (American Accounting Association, Menasha, Wisconsin: George Banta Publishing Company, 1953), p. 209. "A business enterprise is in fact an operating unit all of its life."

taxation purposes of the accounting period, one must adopt the dynamic notion of a business asset. This concept views business assets as expenditures of the present which will become costs or expenses sometime in the future. On the other hand, liabilities or equities are considered expenditures of the future which are expensed in the present. Capitalizing or recording as an asset implies, in the context of this theory, that current costs are assigned to future fiscal periods, and the recording of equities indicates that costs of the future are charged to the current period. From these remarks, it becomes quite clear that the "taxation balance sheet" cannot agree with the commercial balance sheet.[8] It also is clear that the taxation balance sheet requires its own concept of an asset. This concept views individual business assets on the basis of their cost distribution function.

[8] *Ibid.*, p. 67. "Net income is the resultant of two separate factors — periodic costs and periodic revenue."

*Notes on Activity Accounting**

ERIC L. KOHLER†

Thirty years ago this writer, having been appointed controller of the Tennessee Valley Authority, found the accounting system of the then five-year-old government corporation in a sad state of repair. Its punched-card records were disorganized, incomplete, and out of balance; an allotment-ledger-general-ledger reconciliation had never been possible, and encumbrance-based financial statements were a year or more in arrears and of no conceivable value to anyone. Some attempt had been made to follow a classification of accounts that had been put out by the government's General Accounting Office, but that classification had already reached a stage of total obsolescence and its application to TVA operations had proved impossible. The one bright spot could be found in paid vouchers; painstakingly prepared and maintained, they made possible a new recapitulation of TVA's financial events and conditions. A simple reconstitution of transaction groupings that ensued seemed naturally to follow a quite different conception of how accounting could be fitted into the TVA complex of responsibilities as they had been defined by the nation's lawmakers. For lack of a more descriptive phrase the new system was dubbed "activity accounting," and the writer will continue to employ the term in this article.[1]

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* This paper is a version of a talk presented before the Accounting Forum of Washington on March 30, 1967.

† Eric L. Kohler, Chicago, is an accounting consultant. He was President of the American Accounting Association in 1936 and 1946, and was Editor of *The Accounting Review* from 1929 to 1944. Mr. Kohler was Controller of the Tennessee Valley Authority from 1938 to 1941 and was Controller of E.C.A. in 1948 and 1949. He is the author of *A Dictionary for Accountants, Accounting for Management,* and many other books and articles.

[1] See the definition of *activity* and *activity accounting* in the writer's *Dictionary for Accountants* (3rd ed.; Englewood Cliffs, N.J.: Prentice-Hall, 1963).

taxation purposes of the accounting period, one must adopt the dynamic notion of a business asset. This concept views business assets as expenditures of the present which will become costs or expenses sometime in the future. On the other hand, liabilities or equities are considered expenditures of the future which are expensed in the present. Capitalizing or recording as an asset implies, in the context of this theory, that current costs are assigned to future fiscal periods, and the recording of equities indicates that costs of the future are charged to the current period. From these remarks, it becomes quite clear that the "taxation balance sheet" cannot agree with the commercial balance sheet.[8] It also is clear that the taxation balance sheet requires its own concept of an asset. This concept views individual business assets on the basis of their cost distribution function.

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Basic notions of activity accounting have suggested themselves in numerous ways in both business and government; they have arisen from a variety of backgrounds and proximate causes; mostly the growth has been evolutionary: a slow development that in recent years has been somewhat accelerated by the realization of accounting's potential contribution to the processes of management.

And now, within the past few months, the U.S. Department of Defense has announced its version of activity accounting in an illuminating pamphlet, "A Primer on Project Prime"; the new system is to become fully operative throughout the Department by mid-1967. Because the Pentagon is the world's largest enterprise, the main features that make up activity accounting should be of interest not only to other U.S. Government agencies but to the agencies of all governments, wherever found and however constituted.

For any type of organization, private or public, large or small, activity accounting provides a common pattern of financial information from planning and programming to budgeting, transaction-recording, and internal and external auditing and reporting. By expressing projections, progress, and accomplishments in closely related transaction aggregates, and by explaining each in terms of the others, the objectives of good management can be not only sharpened, but more fully realized.

Perhaps the chief virtue of activity accounting is its simplicity. It fits more readily than more conventional accounting schemes into the varied patterns of organization and management. Persons with no previous exposure to accounting find it easy to understand and work with.

For most forms of organization today there is a generally recognized though not always effective management pattern. At the top one pictures a policy source under which the organization operates; this may be legislation creating a government bureau, a board of directors or trustees, and often top officials who by custom or agreement determine all or a part of the governing policies. Next in line, at the top-management level, is a bureau chief, a corporate president, an executive director, a general manager — the head boss who is expected to carry out or administer policies; all operating authority emanates from him. He picks his assistants, determines their duties, establishes an organizational framework, adopts and enforces a plan and the detailed procedures under which operations are carried on. It is within this familiar picture that activity accounting makes its contribution — as a system supporting the organizational structure, making possible firm delegations of authority to subordinates, providing methods of control-

ling operations, introducing and keeping active communications between the various levels of management, facilitating suggestions and uses of measures of performance, and supplying the requirements of informative internal and external reporting.

In short, activity accounting has proved to be a most practicable and operable form of management accounting. Its principal features are these:

1. It aids in establishing and formalizing the work centers that contribute directly or indirectly to the organization's output of goods and services. Each of these centers is populated by workers and often machines; the two usual conditions leading to the establishment of such a center are the presence of (a) a manager capable of supervising the center's operations, and (b) a measurable end product.
2. The plan for establishing centers, and from time to time increasing or decreasing their number and the character of the work expected of them is usually an elastic one; much depends on the nature of the output, supervisory personnel available, and the separability from other operations of the workers and machines that are to be supervised.
3. As a coherent, visible sector of an organization's structure, each center is known as an *organizational unit;* the work it is called upon to perform, carefully specified, is referred to as an *activity* or as activities if more than one class of output is to be recognized.[2]
4. To the greatest extent possible, the organizational unit is given some measure of discretionary authority and a limited autonomy under which it performs its assigned tasks. Its manager or supervisor assumes responsibility for a high quality of the unit's output of goods and services and for a minimum expenditure of time and dollars compatible with such quality.
5. Periodically, usually monthly, the unit manager is presented with a statement of his most recent activity costs; these are direct costs only: costs for which he must account to higher authority. From this statement and an output record which he himself maintains, he computes per-unit costs, and compares them with his previous attainments and with costs from other sources such as standard costs established for him at higher management levels and costs available from other organizations. The activity manager is expected at all times to be knowledgeable concerning the efficiency of his unit's performance and to be able to

[2] An organizational unit has also been called a *cost center* or a *responsibility* center or unit, often with somewhat different functions; the objection to these terms is that each emphasizes only a single aspect of these smallest sectors of the organizational structure.

justify its results in terms of the authority with which he has been charged, the standards set for him, and his unit's output.

6. Reporting by a unit manager to higher authority follows and supplements each periodic statement of activity operations, thus providing the delegating authority with information in a prearranged form that makes the critical review and appraisal of the activity's operations a continuing, informed process. Moreover, in accepting the report, the superior authority effectually shares in the responsibility for what has happened. He in turn accounts to still higher authority — and so on through the chain of command to the highest level of management where the cycle is completed and the top boss, now totally informed and totally responsible, sits in judgment. Reporting may take the form of written or oral reports — perhaps group meetings (e.g. of factory foremen) where mutual and often closely related problems of performance can be presented and possible remedies proposed and discussed. Throughout, the information supplied by the accounts is both relied on and indispensable.

7. Direct costing is an important accompaniment of activity accounting. Even overhead, often distributed over production proportionately to direct-labor cost or hours, or on some other basis common to the traditional practices of cost accountants, remains undistributed, and its component elements are regarded as direct costs subject to the same system of delegation, control, and analysis as any other class of costs. All — even capital — expenditures thus are rated as direct costs of particular activities and for each such expenditure an activity manager assumes responsibility and accountability.

8. Extensions of the concept of direct costing are not only possible but practicable. Separate direct labor, material, and service costs may be maintained for each activity. Where one activity contributes to another or to an end product, and its costs, or measured portions of its costs, are to be transferred, this tripartite breakdown may be continued, the transfer credits being carried, for example, to absorption accounts maintained for the contributing activity. If this practice is consistently followed, as in a manufacturing enterprise, the buildup of manufacturing costs and inventories and transfers of inventories to costs of sales may be expressed in terms of the three elements, thus making possible an input-output analysis having uncommon potentialities. This variation of direct costing by activities has been termed "throughput" accounting.

9. Standard costing can also be a useful adjunct of activity accounting. It can provide bases for transfers from activity accounts to inventory and other aggregate accounts, thereby speeding transfers, providing re-

cipients with foreknowledge of costs to be transferred, and leaving in the accounts of transferor activities under- or over-absorbed balances to be reported on by their managers, and often disposed of in subsequent recastings of standard costs. Where custom or regulations require that inventory costs include factory overhead, standard rates can be utilized.

10. To prepare financial statements, a combination of in-line organizational-unit costs will provide costs of the organization as a whole or of particular departments or other subdivisions of management authority (a factory, for example); a buildup of activities by functional outputs (such as cost of sales or divisions thereof) will supply the elements of an operating statement.

11. In translating operating proposals into forward programs, management familiarity with the functioning of organizational units, developed wherever activity accounting has been instituted, will as a matter of course lead to the identification of programs with existing activities or to the creation of new activities under existing or newly established organizational units. Budget-building for both new and continuing programs will ordinarily commence with estimates prepared by activity managers, proceed to upper management levels for review, modification, and consolidation, thence to supramanagement levels (in the federal government: the Bureau of the Budget and the Congress; in private business: the finance committee of a board of directors) for further review and possible change; as finally approved, the budget will move back through channels and be spread over individual organizational units and activities where, with whatever latitudes and restrictions that may have to be attached, each subdivision will serve as a mandate for forward operations and as a basis against which actual results will be compared and explained. In government accounting this procedure eliminates the need for an allotment ledger. Activity accounting also makes possible a budget of original costs, and, by adding the planned projection of cost flows, a budget of final or end-product costs, the latter including working-capital changes and fixed-asset additions as well as the items that make up an operating statement.

12. Where pricing problems arise, the constituent elements of the prospective output of products or services, stated in terms of critically reviewed unit costs of contributing activities, can be pieced together from the information activity accounting makes continuously available. It may be noted here that the overhead and profit elements of price are now being recognized with increasing frequency as judgment factors, not as problems the answers to which can be supplied by the legerdemain of accounting prorations.

From this brief outline one may conclude that accounting, put to its best use, permits a wide diffusion of management in any organization. Authority from top management, expressed in accounting language and extended "down the line," makes practicable the formation of numerous small centers, each with its own boss who operates, often within narrowly defined limits, but with enough leeway to permit him to modify in some measure previously established operating procedures; this feature of delegated authority may well lead to a better output and often to lower costs. The feeling of accomplishment that follows may supply its own reward; but top management, having defined a unit's goals in the language of accounting, is in the fortunate position of observing independently, often automatically, and of giving at least token recognition to superior achievement at operating levels.

Activity accounting implements and gives a full sense of reality to the management triangle: delegations of authority to the "firing line," the assumption of responsibility by activity heads to exercise in full the authority given them, and the accountability of reporting back ("feedback") on the success (or lack of it) with which the assigned functions have been carried on.

One spur to the development of the organizational unit and the careful predesign for success in its operations is the increasing number of persons competent to head such units, regardless of the work to be performed. This is attributable in part to better management-training programs, especially in large organizations where in recent years skilled foremen and other supervisors have been in short supply, and in no small measure to the satisfactions experienced by those given activity assignments. The contributions of accounting to this improved management environment have been of first importance.

Accounting Principles and Contemporary Legal Action in Japan

TOSHIO IINO*

In Japan, the Legal Institution Deliberation Council's Commercial Code Section began preparations in 1958 for the revision of the accounting provisions in the Commercial Code as the provisions in the existing Code were few in number and extremely defective in substance. Influenced by many valuable suggestions and criticisms of the Tentative Statement, and two years of discussion, the Section prepared and submitted the final report of its revision to the Ministry of Justice in 1960. The Ministry of Justice then released "A Tentative Statement of Revision of Accounting Provisions Applied to Stock Corporations in the Commercial Code" in 1960. The draft of the revision was approved by the Japanese Parliament on April 13, 1962, to become effective April 1, 1963.

This was not the first instance in which accounting provisions applicable to stock corporations and the Commercial Code were revised after World War II. The first revision was completed in 1950 to allow the reconciliation of the Commercial Code and *A Statement of Business Accounting Principles,* a study issued by the Investigation Committee on Business Accounting Systems of the Economic Stabilization Board.

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One of the objectives of *A Statement of Business Accounting Principles* was to improve and make more consistent the practice of commercial and industrial accounting in Japan.[1] Concerning commercial matters, the Commercial Customary Law applies if there are no applicable provisions in the Commercial Code, and the Civil Code is considered to apply if there is no specific law.[2] *A Statement of Business Accounting Principles* does not apply to matters not mentioned by the Commercial Code because these matters are viewed only as aspects of commercial custom and not as the Commercial Custom Law. It is important to note that the basic regulations concerning financial accounting are specified by law but not by *A Statement of Business Accounting Principles* and that the provisions of the Code are not supplemented by *A Statement of Business Accounting Principles,* even if there are no legal provisions.[3] This accounts for the vital importance of the reconciliation of the Commercial Code and *A Statement of Business Accounting Principles.*

In relation to the amendment of the Commercial Code, the Ministry of Justice released "The Regulation for Corporate Balance Sheets and Income Statements" which prescribes the contents and form of balance sheets and income statements to be submitted to the general meeting of shareholders in 1963.

This article will discuss the philosophy of those accounting provisions of the Commercial Code [of Japan] applicable to stock corporations and the Regulation for Corporate Balance Sheets and Income Statements of Japan.

ACCOUNTING PROVISIONS OF THE COMMERCIAL CODE OF 1950

Deferred Assets

No legal provisions for deferred assets existed until the Commercial Code in 1938 recognized organization expense, bond discount, and

[1] For the background of the establishment of *A Statement of Business Accounting Principles* and its details, see Yukio Fujita, "The Evolution of Financial Reporting in Japan," *The International Journal of Accounting Education and Research,* Vol. 2, No. 1 (Fall, 1966) 55-56, 58-61.

[2] *Japanese Commercial Code,* Article 1.

[3] In Germany, the basic regulations concerning financial accounting are specified by law and not by accounting principles, but the provisions of the law are supplemented by accounting principles. For the relationship between law and accounting principles in Germany, see Peter Swoboda, "Comparison of Consolidated Financial Statements in the United States and West Germany," *The International Journal of Accounting Education and Research,* Vol. 1, No. 2 (Spring, 1966), 9-10.

interest during construction[4] as deferred assets. This concept of deferred assets was enlarged to include commissions and expenses on capital shares in 1950, as a result of the reconciliation of the Commercial Code and *A Statement of Business Accounting Principles.*

Two different legal opinions existed as to whether the Code restricted deferred assets to those four categories or not. In other words, it was uncertain whether stock corporations could legally defer some other expenditures or not. Some insisted that these four were only examples and that the Code recognized such items as development expenses and experimental and research expenses which *A Statement of Business Accounting Principles* defined as deferred assets. But they were in a decided minority. The overwhelming legal majority contended that deferred assets should be limited to those four items on the ground that *A Statement of Business Accounting Principles* had no application to matters for which the Commercial Code did not provide, because it was only commercial custom and not Commercial Custom Law. Further, the so-called deferred assets were not *true* assets but *fictitious* assets which were unable to be converted into cash.[5] One may question why they restrict assets to those which have monetary value.

A Genealogy for the Commercial Code

It was in 1673 that accounting was first introduced into a national commercial code. During 1660, business in France was greatly depressed. Many businesses entered bankruptcy and vast numbers of fraudulent bankruptcy cases were initiated to conceal property and/or provide methods for its improper transfer. The *Ordonnance de Commerce of* 1673, which was enacted under these troubled business circumstances, required an inventory — a detailed list of all the assets and liabilities — to be prepared every two years on a regular basis and on the occasion that a business petitioned for bankruptcy. The objective of this provision was to protect creditors against bankruptcy, particularly fraudulent bankruptcy, by giving them detailed information of

[4] A Corporation, which is deemed unable to initiate the whole of business for two years or more after the corporation has come into existence, may distribute a fixed rate of interest to the shareholders during a specified period prior to the commencement of the whole of business. The interest is called "interest during construction." The amount of it shall not be more than one-twentieth of the issue price of shares for which interest is to be distributed. (Article 290)

[5] Teruhisa Ishii, *Sho-Ho,* I (Commercial Code, I), (Tokyo, Japan: Keiiso-Shobo, 1956), p. 404.
Makato Yazawa, "Shisan-Hyoka to Kurinobe-Shisan" (Assets Valuation and Deferred Assets), in *Kabushiki-Kaisha-Ho Koza* (Studies in Stock Corporations Act), ed. Kotaro Tanaka (Tokyo, Japan: Yuhi-Kaku, 1959), p. 1577.

assets and liabilities in the regular course of enterprise operations or at the time of the petition for bankruptcy.[6]

Concerning bankruptcy, the important point is whether assets can fully meet liabilities or not as bankruptcy is the financial state in which liabilities exceed assets. The objective of the accounting provisions in *Ordonnance de Commerce* was to determine the net worth existing for present or potential creditors. From this viewpoint, only those assets that were available to pay liabilities or could be converted into cash were regarded as assets. Assets were viewed as a debt-paying medium.[7]

This accounting and commercial attitude, taken from the Napoleonic *Code de Commerce,* was accepted in many European countries and came to Japan in 1890, via Germany, when that country's first Commercial Code was enacted. This accounts for the major Franco-German influence on the accounting provisions of the Commercial Code in Japan.

ASSET

The Legal Concept of Asset

In corporations, special emphasis must be given to the protection of creditors. Shareholders' liability of corporations is limited to the amount of their shares.[8] Therefore, even if corporate assets are not fully sufficient to satisfy its liabilities, creditors shall not be paid by the shareholders' private assets as in the case of some other types of corporations. Corporate assets are the only available resources to the creditors. In the distribution of dividends to shareholders, the most important concern is the prevention of the shareholders victimizing creditors by their receipt of undue dividends. Corporate assets, adequate to meet the firm's liabilities, must constantly be maintained for creditors. This is a problem of capital maintenance and of the profit available for dividends and will be discussed later. From the viewpoint of the protection of corporate creditors, the ability to satisfy liabilities as they mature is an indispensable requisite of an asset.

[6] For the background of the establishment of the *Ordonnance de Commerce* and its provisions, see:

E. Schmalenbach, *Dynamische Bilanz* (4. Aufl.; Leipzig: G. A. Glockner, 1926), pp. 63-64.

Stanley E. Howard, "Public Rules for Private Accounting in France, 1673 and and 1807," *The Accounting Review,* VII, No. 2 (1932), 91-102.

Stanley E. Howard, "Business Partnerships in France Before 1807," *The Accounting Review,* VII, No. 3 (1932), 243-57.

[7] George Hillis Newlove and Paul S. Garner, *Advanced Accounting,* Volume 1, *Capital and Income* (Boston: D. C. Heath & Co., 1951), p. 422.

[8] *Japanese Commercial Code,* Article 200.

It depends entirely upon the legislative intent to determine how soon after incorporation a dividend may be paid or if the amount of the dividends can be maintained after the bond issue so that the four items mentioned above as having no debt-paying ability are allowed to be listed on the asset side of the balance sheet as deferred assets.[9] Exceptions must be strictly noted. This is the basic idea of the majority of lawyers who contend deferred assets should be limited to those items which the Code mentions.

Asset Valuation

The implication that assets are limited to those which are realizable exerts an influence upon the valuation of assets. The general principle of asset valuation in the Commercial Code is:

> The valuation of assets shall not exceed the value as of the time of the preparation of the inventory, except for the fixed assets used in business operations, which may be valued at the amount of the acquisition cost or manufacturing cost less reasonable value diminution.[10]

Assets are valued at a less-than-market-price basis and fixed assets may be valued at a cost-less-depreciation basis.

There are two kinds of market price: the realizable value and the replacement cost. No disagreement exists between lawyers concerning the interpretation of market price as the realizable value, and what is most important is how many liabilities the assets can satisfy, not the amount that it did or will cost from the viewpoint which regards assets as a debt-paying medium or the fund available to pay liabilities.

The Philosophy of the Accounting Provision

The dominant characteristics of the accounting provisions of the Commercial Code of 1950 include the view that assets are regarded as a debt-paying medium and are valued on a realizable value basis. This accounting thought is based upon the assumption of the liquidation of a business and not that of a going concern with particular stress on the protection of creditors. The fact that the asset valuation principle is not a market-price basis, but a less-than-market-price basis depends upon the latter basis being conformable to creditors' viewpoint of conservatism which prefers "not worse but better" net worth or "maximum

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[9] Osamu Mimura, *Kabushiki-Kaisha-Kaikei ni kansuru Riron to Hosei* (Theory and Legislation of Corporate Accounting), (Tokyo, Japan: Homu-Kenshu-Sho, 1959), p. 112.

[10] *Japanese Commercial Code,* Article 34. 1.

liabilities and minimum assets"[11] to real net worth, assets, or liabilities.

Paton and Littleton note:

> The Law, it is true, often appears to ignore the concept of continuity in considering the specific controversies with which the legal machinery is confronted. . . . Hence the stress on "values" and "valuations" rather than on cost and the process of accounting for costs.[12]

The accounting provisions of the 1950 Commercial Code are a typical example of their opinion.

The accounting provisions of the Japanese Commercial Code underwent considerable revision in 1962 as the result of the wide reconciliation of the Commercial Code and *A Statement of Business Accounting Principles.* One might wonder if the philosophy of accounting provisions mentioned above were changed by the revision or merely continued in the new provision.

ACCOUNTING PROVISIONS OF THE COMMERCIAL CODE OF 1962

With the amendment of the Commercial Code in 1962, the philosophy of *A Statement of Business Accounting Principles* was clearly introduced into the existing law. The distinctive characteristics of the amendment may be summarized in four points: (1) it radically changed the principle of asset valuation; (2) it enlarged the scope of the deferred assets classification; (3) it recognized provisions as items to be listed in the liabilities section of a balance sheet; and (4) it expressly specified the maximum amount of profits available for dividends.

Change of Asset Valuation Basis

The asset valuation basis changed from a less-than-market-price basis to an historical cost basis, which was indeed a Copernician change; several specific regulations were introduced for each major asset type. A summary of these regulations is essential to a meaningful discussion. There, the following abstract is provided:

> 1. Inventories shall be valued at the acquisition or production cost amount. If current cost is lower than acquisition or production cost, the inventories *may be* valued at current cost, but if current cost is substantially lower than acquisition or production cost and if the recovery to the acquisition or production cost cannot reasonably be expected, they *shall* be valued at current cost. (Article 285-2)
> 2. Fixed assets shall be valued at the acquisition or production cost less regular and reasonable depreciation or depletion charges. If an unpredictable

[11] W. A. Paton and A. C. Littleton, *An Introduction to Corporate Accounting Standards* (Columbus, Ohio: American Accounting Association, 1940), p. 126.
[12] *Ibid.,* p. 10.

dimunition of value has occurred, a reasonable amount *shall* be deducted. (Article 285-3)

3. Monetary claims shall be valued at the amount of the claim; but if they were acquired at an amount less than the amount of the claim or if there is any justifiable doubt, they *may* be valued at a prudent lesser amount. If it is doubtful that the amount of claims is fully collectible, the estimated uncollectible amount *shall* be deducted. (Article 285-4)

4. Bond investments shall be valued at their acquisition cost; if the acquisition cost is other than the face value, they *may* be valued at an amount after a proper addition or deduction from acquisition cost. If the current cost of the marketable bonds is lower than their acquisition cost, the valuation method of inventories shall be applied to them, and the method of valuing monetary claims shall be applied to unmarketable bonds. (Article 285-5)

5. Shares shall be valued at their acquisition cost. The valuation method of inventories shall be applied to marketable shares, and unmarketable shares *shall* be valued at a reasonably adjusted amount, if the financial condition of the issuing company has been materially impaired. (Article 285-6)

6. Goodwill may be included in the assets section of a balance sheet only in the case where it was purchased or arose in a merger situation. It shall be valued at its acquisition cost and *shall* be amortized by not less than the average amount in each period within five years after the date of acquisition. (Article 285-7)[13]

These separate valuation concepts may be summarized as follows:

The application of the historical cost basis excludes holding gains from the calculation of periodic income which were recognized in the former Code. The only exception is the case of a write-up of the book value of bonds acquired at a discount under the amortization method. But this is not an exception to the cost basis in its true sense because the amount of the write-up shall be regarded as interest income which must be distinguished from holding gains. On the other hand, in some cases, the book value of assets shall be written off. They are: (1) where the current cost of inventories and marketable securities is materially lower than their acquisition cost and the recovery to the latter cost cannot be reasonably expected; (2) where reasonable and regular depreciation or amortization is required; (3) where monetary claims and unmarketable bonds are not expected to be realized at the full amount of the claims; (4) where the net worth per share of the issuing company of unmarketable shares has been materially impaired; and (5) where goodwill is listed as an asset in the balance sheet. In addition, in cases (1) where the decline of current cost is not substantial or (2) where even if its decline is substantial, the recovery to acquisition cost can be

[13] The Japanese Corporation Income Tax Law provides that goodwill shall be amortized in a straight-line fashion within five years.

reasonably expected, the application of the "cost or market, whichever is lower," basis (the write-off of book value) is allowed.

Enlargement of the Concept of Deferred Assets

In addition to organization expense, bond discount, commissions and expenses on capital shares, and interest during construction, the revised Code permits the inclusion of four additional items in this special asset category. They are: (1) preliminary (start-up) expenses, (2) development expenses, (3) experimental and research expenses, and (4) bond expenses. With this conceptual expansion of the deferred asset category, the revised Code apparently approached the views expressed in *A Statement of Business Accounting Principles.*

BUSINESS ACCOUNTING PRINCIPLES

The Code provided that if these items were deferred, they shall be amortized in the following ways:

1. Organization expense shall be amortized by not less than the average amount in each period within five years after the corporation is formed or if interest during construction is distributed after the corporation has ceased to distribute it. (Article 286)
2. Preliminary (start-up) expenses shall be amortized by not less than the average amount in each period within five years after the commencement of the business. (Article 286-2)
3. Development expenses and experimental and research expenses shall be amortized by not less than the average amount in each period within five years after the original disbursements. (Article 286-3)
4. Commissions and expenses on capital shares and bond expenses shall be amortized by not less than the average amount in each period within three years after the date of issuance. But if the life of the bond issue is less than three years, bond expenses shall be amortized by not less than the average amount in each year within the life. (Article 286-4, 286-5)
5. Bond discount shall be amortized by not less than the average amount in each period during the life of the issue after the date of issuance. (Article 287-6)

Recognition of Provisions

It was the opinion of the overwhelming majority of the lawyers that many types of provisions were not recognized as accounting liabilities by the 1950's Code on the ground that there was no prescription for them. The revised Code allowed listing "provisions for specific future disbursements and/or expenses" in the liabilities section of a balance

sheet. (Article 287-2) Provisions are created by a charge to revenue in the case of the all-inclusive concept of income; the provision for repairs is a typical example. One of the remarkable merits of the revised Code is that provisions which are not legal debts are permitted to be included in the liabilities section of a balance sheet, just as the Code enlarged the concept of deferred assets which were not legal assets.

Clarification of Profits Available for Dividends

Concerning dividends, Article 290 of the former Code stated:

> No dividend may be paid until a capital impairment caused by a loss has been made good and the reserve prescribed in the first paragraph of the preceding Article has been deducted.

The said reserve is called a "legal revenue reserve." At least one-twentieth of the profit for the current period is required to be retained until it shall amount to one-fourth of the stated capital. The sum to be credited to the legal revenue reserve each period was revised by the new Code to be no less than one-tenth of the cash dividend. (Article 288) A sharp controversy had developed as to what the "capital impairment caused by a loss" means. That a debate has arisen as to the legal interpretation of the provision for dividends payment is remarkable because the amount of profits available for dividends is one of the central issues in the financial life of corporations and its determination has been said to constitute one of the main purposes of both corporate law and corporate accounting.[14]

Revised Article 290, which defines the term "profits available for dividends" and clarifies the concept of capital impairment, states:

> Profits may be paid to the extent of the amount of the net worth on a balance sheet minus the following amounts:
>
> (1) The amount of stated capital,
> (2) The total of the legal capital reserve and the legal revenue reserve,
> (3) The amount of the legal revenue reserve required to be retained for the current period. . . .

The provisions of this Article may be expressed by the following formula:

> The maximum amount of profits available for dividends = (assets − liabilities) − stated capital − legal capital reserve − legal revenue reserve, including the amount required to be retained for the current period.

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[14] A. C. Littleton, *Accounting Evolution to 1900* (New York: American Institute Publishing Company, Inc., 1933), p. 206.

In the above formula, the deduction of the liabilities from the assets attempts to determine if the corporation has sufficient assets to meet liabilities, or in other words, whether adequate corporate net assets are maintained for creditors, particularly unsecured creditors. The deduction of stated capital from the net asset amount requires the maintenance of assets equal to stated capital. The theory justifying the formula is that net assets provide for the claims of creditors before shareholders and that stated capital provides for the permanent investment of shareholders.[15]

From the viewpoint of dividend payments, the first three items of the above formula indicate that no dividend may be paid if the effect would be to reduce the value of the total assets below that of the liabilities and stated capital.[16] Stated capital is required to be maintained as security for creditors;[17] in other words, a dividend may not be paid unless the stated capital has been maintained. Therefore, in the revised Code, a "capital impairment" test is applied to the dividend payments.[18]

Concerning stated capital, Article 284-2 states:

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[15] Ray Garrett, "Capital and Surplus Under the New Corporation Statutes," *Law and Contemporary Problems,* XXIII, No. 2 (Spring, 1958), 242.

[16] L. C. B. Gower, *The Principles of Modern Company Law* (2nd ed.; London: Stevens & Sons Limited, 1957), p. 108.

[17] James C. Bonbright, *The Valuation of Property,* Volume II (New York and London: McGraw-Hill Book Company, Inc., 1937), p. 914.

[18] For the grouping of the rules limiting the declaration of dividends, see the following literature:

James C. Bonbright, *op. cit.,* pp. 915-16.

Donald Kehl, *Corporate Dividends: Legal and Accounting Problems Pertaining to Corporate Distributions* (New York: The Ronald Press Company, 1941), p. 26.

William P. Hackney, "Accounting Principles in Corporation Law," *Law and Contemporary Problems,* XXX, No. 4 (Autumn, 1965), 799.

A. C. Littleton, "The Dividend Base," *The Accounting Review,* IX, No. 2 (June, 1934), 140.

Littleton's classification is one of the most theoretically developed to be found in the accounting literature. He classifies the rules limiting the declaration of dividends into four groups:

A. An excess-of-assets base.
   1. No dividend may be paid while the corporation is insolvent or which will render it insolvent. . . . insolvency test.
   2. No dividend may be paid which will impair the capital of corporation (included here are all the statutes limiting dividends to "surplus"). . . . capital impairment or balance sheet surplus test.

B. A net-profit base.
   1. No dividend may be paid except from the balance of earned and hitherto undistributed profits. . . . accumulated net profits test.
   2. No dividend may be paid except from current profits. . . . current net profit test.

1. Except as otherwise provided for in this Code, the stated capital of a stock corporation shall be equal to the total amount of the par value of all the issued par shares and the total amount of the issue-prices of all the issued non-par shares.
2. As to the non-par shares, an amount not exceeding one-fourth of the issue-price may not be credited to the stated capital; the same shall be applied to an amount which exceeds the minimum issue-price which shall be stated in the articles of incorporation and does not exceed one-fourth of the issue-price when non-par shares are to be issued at the time of incorporation.

In the revised Code, the "pure" test of capital impairment is not applied, because in the determination of the maximum profits available for dividends not only stated capital but also the legal capital reserve and the legal revenue reserve shall be deducted from assets or net worth.

The legal capital reserve contains (1) paid-in surplus created by the original issuance of shares, (2) surplus created by a subsequent reduction of stated capital or cancellation of shares, and (3) surplus created by mergers and combinations.[19] (Article 288-2) This is only a part of the accounting concept of capital surplus or capital reserve as found in the British Companies Acts.[20]

The justification that these three items be deducted from the net assets total as a legal capital reserve in the determination of profit available for dividends does not depend upon the fact that they are viewed as indisposable surplus from their very nature. Rather it depends upon the fact that both the legal capital reserve and the legal revenue reserve which are disposable profits from the viewpoint of the pure rule of capital impairment shall be retained as a cushion to protect creditors.

These two legal reserves can only be reduced to restore any capital impairment and are credited to the stated capital. (Article 293-3) The legal capital reserve and the legal revenue reserve in the Japanese Commercial Code reveal a certain similarity to the legal reserve (gesetzliche Rücklage) of the German Stock Corporation Act (Aktiengesetz) in the spirit of legislation for creditor protection. According to the German Stock Corporation Act, the legal reserve is required to be retained by law and can only be reduced to offset extraordinary losses.

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[19] To record transactions resulting from mergers and combinations of business entities, the Japanese Commercial Code permits two alternatives: recording such transactions as either a pooling of interest or as a purchase. (Article 288-2.1 [5])

[20] According to a recent British Companies Act, "capital reserve" shall not include any amount regarded as free for distribution through the profit and loss account, and "revenue reserve" shall mean any reserve other than a capital reserve. (Eighth Schedule, Part IV, paragraph 27 [1] [C])

It contains: (1) an amount equal to the total par value of legally permitted reductions of outstanding capital shares; (2) at least one-twentieth of the profit for the current period until it shall amount to one-tenth of the outstanding capital shares; (3) paid-in surplus created upon the original issuance of par shares in excess of par value; (4) premiums on bonds convertible into capital shares at fixed rates; and (5) payments of shareholders in connection with preemptive stock rights. (Article 150)[21] The concept of the legal reserve, especially the legal revenue reserve, is peculiar to the Franco-German laws and does not exist in the Anglo-American laws.

Evaluation of the Revised Code

Despite the fact that the determination of distributable profits is normally one of the chief objectives of the accounting provisions in any national commercial code, the relevant provisions in some countries allows for diverse and conflicting interpretations. The British Companies Act is a typical example of this situation.

In the British Companies Act, there is no express provision for the determination of profits available for dividends. The British courts have declared that "dividends must not be paid out of capital,"[22] or that "dividends must only be paid out of profits."[23] There was no general and direct legislative authority for either of these propositions, but they have been viewed as the fundamental principles of dividend payments.[24] The courts have devoted considerable effort to define "capital" and "income" fully but it has proven to be impossible to date to formulate satisfactory and exhaustive definitions.[25] The determina-

[21] For "reserves" in German accounting practice, see Gerhard G. Mueller, *Accounting Practices in West Germany* (Seattle: College of Business Administration, University of Washington, 1964), pp. 23-26.

[22] This proposition appears in the Companies Clauses Act of 1845, relating to statutory companies. Section 21 of the Act reads, "The company shall not make any dividend whereby their stock will be in any way reduced. . . ."

[23] This proposition is expressed in most articles of association, including Table A to the Companies Act of 1862. (Article 116)

[24] These two propositions are generally assumed to be identical. L. C. B. Gower, *op. cit.*, note 53 at p. 107.

[25] For the details of profits available for dividends in the British Companies Act, see the following literature:

H. C. Edey and Prot Panitpakdi, "British Company Accounting and the Law, 1844-1900" in *Studies in the History of Accounting*, A. C. Littleton and B. S. Yamey, eds. (Homewood, Ill.: Richard D. Irwin, Inc., 1956), pp. 356-79.

A. C. Littleton, *op. cit.*, Chapter XIII.

B. S. Yamey, "The Case Law Relating to Company Dividends," in *Studies in Accounting Theory*, W. T. Baxter and Sidney Davidson, eds. (2nd ed.; Homewood, Ill.: Richard D. Irwin, 1962), pp. 428-42.

tion of profits available for dividends, as well as the measurement of all related items (assets, liabilities, stated capital, and legal reserves), is expressly detailed in the revised Japanese Code. All accounting provisions of the revised Code are closely interrelated concepts of disposable profits. As contrasted with the British Companies Act, the revised Japanese Code is remarkable because it is so specific as to not require any argument concerning disposable profits. This is a point worth mentioning.

According to the accounting process, assets can be classified into those that are disposed of through charges to income and those that result directly or indirectly in cash flows.[26] The former are called nonmonetary assets or service resources and the latter, monetary assets or monetary resources.

Inventories and machines are clear examples of nonmonetary assets. They are acquired in an exchange of cash or of a cash equivalent and are normally utilized in the usual course of business operation. With their use, they become expenses. Until that time, they are "service-potentials available for or beneficial to expected operation."[27] Even if the current costs of these nonmonetary assets are more than their acquisition costs, they shall not be revalued for amounts exceeding the acquisition costs as they represent cash, cash equivalents, or acquisition costs, regardless of their present form. This is the conceptional justification for the valuing of tangible nonmonetary assets, such as inventories, at acquisition costs.

There is another type of nonmonetary asset. They are those that do not have service-potentials but rather are deferred to allow a reasonable periodic allocation of expenses. Organization expense does not seem to meet any test of service-potential, but it is not treated as a loss at a time of disbursement. From a theoretical viewpoint, it should be amortized over the firm's life because it is an indispensable disbursement for the commencement of business. Bond expenses and commissions and expenses on capital shares shall be amortized over the life of their issue as financing cost of monetary resources.

Realization is an indispensable prerequisite for monetary assets but not for nonmonetary assets. The common prerequisite of all nonmonetary assets defies determination. The prerequisite of some

[26] Eldon S. Hendricksen, *Accounting Theory* (Homewood, Ill.: Richard D. Irwin, Inc., 1965), p. 224.

[27] American Accounting Association, "Accounting and Reporting Standards for Corporate Financial Statements, 1957 Revision," *The Accounting Review*, XXXII, No. 4 (October, 1957), 538.

nonmonetary assets is the condition of availability or benefit for future operations. Other nonmonetary assets may be regarded as assets only from the viewpoint of a rational determination of periodic income. But all nonmonetary assets are characterized as "disbursements, not yet expense,"[28] or "deferred charges to future income."[29] The reason for not considering deferred assets which have no realizable value as *fictitious* assets but as *true* assets — assets in the accounting sense — is that they are "deferred charges to future income."[30]

It is not reasonable to treat certain types of expenses, which may be reasonably expected to occur, based on past experience and for which the firm has obligated itself, as an expense only for the period of cash outlay.[31] Cash outlays which are necessary to maintain the business in sound condition shall be allocated as an expense to the appropriate periods.[32] Examples of the former are estimated collection costs of receivables, additional costs under a performance guarantee contract clause, and estimated costs of product or service guarantees. An example of the latter type is the provision for repairs.[33]

In these cases, expenses should be estimated. Provisions are created by charging these expenses to revenue. They are regarded as "an expense, but not yet a disbursement,"[34] and are justified only for the purpose of determining periodic income. Some provisions, such as the provision for estimated collection costs of receivables or the provision for repairs, are not legal debts but may be included in the liabilities section of a balance sheet by the provisions of the revised Code.

Both the enlargement of the concept of deferred assets not to be legal properties or rights and the recognition of the concept of provisions for items that are not necessarily legal debts are the result of the reconciliation of the Commercial Code and *A Statement of Business Accounting Principles*, and constitute one of the major merits of the revised Code.

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[28] E. Schmalenbach, *op. cit.*, pp. 116, 120.

[29] Stephen Gilman, *Accounting Concepts of Profit* (New York: The Ronald Press Co., 1937), pp. 397-404; "Accounting Principles and the Current Classification," *The Accounting Review*, XIX, No. 2 (April, 1944), 114.

[30] Interest during construction is neither a monetary asset nor nonmonetary asset, but it represents a refund of capital. Theoretically, it shall be shown as a deduction from total capital and surplus in the net worth section of a balance sheet.

[31] Eldon S. Hendricksen, *op. cit.*, p. 360.

[32] *Ibid.*, p. 360.

[33] Arthur Andersen & Co., *Accounting and Reporting Problems of the Accounting Profession* (Chicago: Arthur Andersen & Co., 1961), p. 18.

[34] E. Schmalenbach, *op. cit.*, pp. 116, 120.

The accounting provisions in the revised Code are not completely reconcilable, however, with *A Statement of Business Accounting Principles.* Several significant discrepancies still exist between them. The most glaring discrepancy is found in the deferred asset discussion. The application of a less-than-average amount amortization method to deferred assets is based on the idea that these assets shall be amortized as soon as possible because, from the point of capital maintenance, they should not be viewed as assets. In addition, in some cases, deferred assets are treated differently from other assets in the determination of profits available for dividends. If the total amount of (1) preliminary (start-up) expenses, (2) development expenses, and (3) experimental and research expenses is more than the total amount of the legal capital reserve and the legal revenue reserve, including the amount legally required to be retained for the current period, the difference shall be deducted from the net assets in the determination of profits available for dividends. (Article 290.2 [4])

That the profits available for dividends varies with the relationship between the sum of the legal reserves and the total of deferred assets depends upon the fact that the Code still views deferred assets as losses. The excess of deferred assets in relation to the legal reserves is considered to indicate an impairment of capital. No dividend may be paid before the restoration of the amount of capital impairment. The deduction of the excess from the net assets attempts to restore the capital impaired. If the legal reserves are more than the deferred assets, no deferred assets are deducted from the assets, as all losses represented by deferred assets can be fully restored by the legal reserves. The enlargement of the concept of deferred assets in the revised Code does not mean it has changed its basic views on deferred assets. The revised Code still regards deferred assets as *fictitious* assets or losses and not as *true* assets. Conceptually, all deferred assets should be given similar treatment to determine disposable profits. But deferred assets, except for the three items mentioned above, are not treated as losses in the determination of capital impairment since, in reality, their amount is immaterial.[35] The enlargement of the concept of deferred assets does not accomplish a real reconcilement of the Commercial Code with *A Statement of Business Accounting Principles.*

The basic principle of asset valuation in the revised Code is the historical cost basis, but in some cases, the book value of assets shall or may be written off. This new asset valuation basis prohibits the

[35] Akinobu Ueda *et al., Kabushiki-Kaisha no Kaikei* (Corporate Accounting), (Tokyo, Japan: Chuo-Keizai-Sha, 1963), pp. 30-31.

recognition of any holding gains but does permit the recognition of holding losses. Needless to say, the prohibition of a write-up of book value in the first case, and permission to write down the book value in the second case, reduce the profits available for dividends. The same is true in the recognition of provisions under the revised Code as all liabilities are deducted from the assets to determine the profits available for dividends. Other things being equal, the smaller the computed profits available for dividends, the greater the protection of the creditors. The justification to have the revised Code reconcile with *A Statement of Business Accounting Principles* concerning the change of the basis of asset valuation and the recognition of provisions comes primarily from the belief that the reconciliation could be expected to have a more beneficial effect upon the protection of creditors than did the former Code.

THE REGULATION FOR CORPORATE BALANCE SHEETS AND INCOME STATEMENTS

Accounting consists of two processes: measurement or accounting in the narrow sense, and communication or reporting. The determination of profits available for dividends is a legal phase of the measurement of or distinction between capital and income, which is one of the main objectives of financial accounting.[36]

Concerning the communication to shareholders, every Japanese company is required to prepare the following documents for each accounting period (Article 281):

1. an inventory
2. a balance sheet
3. a business report
4. an income statement
5. a statement pertaining to the legal reserves and to the distribution of profits or interest during construction.

The directors shall submit four of these five, excluding an inventory, to each ordinary general meeting of shareholders for approval. (Article 283) The documents submitted to the shareholders have not always been helpful in communicating useful information to the shareholders; the accounting facts were not always clearly and fully disclosed as no regulations required the manner of their preparation. In 1963, the Regulation for Balance Sheets and Income Statements was released to

[36] T. H. Sanders, H. R. Hatfield, and U. Moore, *A Statement of Accounting Principles* (New York: American Institute of Certified Public Accountants, 1938), p. 1.

avoid this unfortunate corporate accounting reporting lack. The regulation specified both the contents and form of balance sheets and income statements to be submitted at the general meeting of shareholders.[37] It was twenty-five years before that the Law concerning the Operation of the Amendments to the Commercial Code prescribed that the manner of preparing financial statements and their form should be regulated by law. Concerning the general principle of the contents and form of balance sheets and income statements, Article 2 states:

Every balance sheet and income statement shall be prepared in such a way as to furnish accurate judgement on the financial status and the operating results of the company.

This principle is equivalent to the "true and fair" principle in the British Companies Act.[38]

Classification of Assets and Liabilities

Concerning the section to be shown in a Balance Sheet, Article 4 specifies:

A balance sheet shall be divided into an assets section, a liabilities section, and a net worth section with a total amount of each section.

According to the Regulation, the assets section shall be divided into current assets, fixed assets, and deferred assets. (Article 5) The fixed assets subsection shall be subdivided into tangible fixed assets, intangible fixed assets, and investments. (Article 5) Prepaid expenses which are not expected to generate the receipt of services within one year shall be included in the intangible fixed assets subsection. (Article 19)

The classification of assets and the treatment of long-term prepaid expenses by the Regulation are different from those of usual accounting. According to American and Japanese usage, long-term prepaid expenses and deferred assets are included in deferred charges.[39]

Traditional accounting, conceptually, classifies two kinds of assets: current and noncurrent. The former are assets which are useful for the payment of liabilities payable within one year. Noncurrent assets are of two kinds: fixed assets and deferred charges. Fixed assets are those which have a realizable value and can be used to meet debts when the current assets are not sufficient to satisfy debts.

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[37] The German Stock Corporation Act regulates contents and form of balance sheet, income statement, and business report (Geschäftsbericht) by law, but the Japanese new regulation is not applied to business report. (*German Stock Corporation Act,* Section 160.)

[38] *British Companies Act,* Section 149 (1).

[39] See *Regulation S-X,* Rule 5-01. 17.

In the Regulation, a different criterion of the classification of assets is applied. As to the assets classification in the Regulation it is remarkable that the deferred assets are reported separately in a special section. The justification of the separation of deferred assets from long-term prepaid expenses depends upon the fact that they are different in their nature: the former are not legal properties nor legal rights, but the latter are, in many instances, legal claims. This separation attempts to classify the items included in deferred charges into legal and nonlegal assets.[40]

According to the Regulation, assets are first classified conceptually as legal assets or nonlegal assets. The latter are called deferred assets. The former, legal assets, are then subclassified as current assets or fixed assets, in accordance with accepted accounting theory.[41]

The Regulation further applies these criteria of asset classification to the classification of liabilities. According to Article 25, the liabilities section shall be divided into current liabilities, fixed liabilities, and provisions. Provisions are stated separately in a particular subsection. (Article 32) This division aims to distinguish provisions which are nonlegal debts, from other liabilities, which are legal debts.[42]

In Japanese commercial practice, almost every corporate balance sheet prepared in accordance with the Regulation includes Reserve for Bad Debts and Reserve for Inventory Price Decline accounts in the provisions subsection of the liabilities section.

The corporate income tax laws of Japan allow an increase in the Reserve for Bad Debts to be used as a deduction for tax purposes to a specified maximum percentage of accounts and notes receivable, if this

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[40] Akinobu Ueda *et al., op. cit.,* pp. 53, 55.

[41] For the asset classification, see the following literature:

A. A. Fitzgerald, "The Classification of Assets," *Accounting Research,* Vol. 1, No. 4 (July, 1950), 357-72.

A. A. Fitzgerald and L. A. Schmer, *Classification in Accounting* (Sydney: Butterworth & Co., Ltd., 1952), pp. 92-112.

Stephen Gilman, *op. cit.,* Chapter XVII, pp. 258-68.

L. Goldberg, "A Note on Current Assets," *Abacus,* Vol. 1, No. 1 (September, 1965), 31-45.

Toshio Iino, "Accounting Classifications of Assets," *The Annals of the Hitotsubashi Academy,* VII, No. 2 (April, 1956), 66-78.

[42] In many countries, accounting regulations prescribe that "provisions" shall be stated under a separate heading. (*Regulation S-X,* Rule 5-01. 33; Eighth Schedule in *The British Companies Act,* Part I, paragraph 6; *The German Stock Corporation Act,* Section 151 [3])

A Statement of Business Accounting Principles applies a one year rule to provisions and includes them either as current liabilities or fixed liabilities, according to their nature.

percentage is recorded in the books. Even if the maximum percentage may not be required based on the past experience of the company, unnecessary amounts are often recorded to provide the company with additional tax deductions. Similar treatment is followed for the Reserve for Inventory Price Decline. Even if the book value of inventories is reduced to the market value, a certain percentage of the market price may be taken as a tax deduction, if it is recorded in the books.

Even though both these reserves are not provisions but rather non-taxable earned surplus items, they are included in the provisions sub-section of the liabilities section of a balance sheet. From a theoretical viewpoint, the charges to these revenues are not expenses or losses and do not match with specific revenues or gains but are only allowed in the determination of taxable income. Therefore, the provisions sub-section of the liabilities section of a balance sheet includes both provisions in the accounting sense and nontaxable earned surplus. This undesirable method of reporting arises simply from the fact that tax deductions are allowed for these items only where they are actually recorded in the books, and the adjustment of business income and taxable income on the tax returns is not allowed. This is one of the reasons why Japanese corporate balance sheets are not very understandable by readers, especially non-Japanese.

Classification of Net Worth

Article 34 specifies that the net worth section shall be further subdivided into stated capital, legal reserves, and other surplus sections. In American and Japanese usage, net worth or capital is subdivided into stated capital and surplus; surplus is then further subdivided as capital surplus and earned surplus.[43] If one wishes to distinguish between capital and income, it is necessary to divide surplus into capital surplus and earned surplus. Both legal reserves and "other surplus" in the Regulation are a mixture of capital surplus and earned surplus, because legal reserves consist of legal capital reserves and legal revenue reserves; "other surplus" includes capital surplus, which is excluded from the legal capital reserve. The balance sheet prescribed of the Regulation does not clearly distinguish capital from income.

This apparently unreasonable classification has a profound legal implication. The Regulation divides net worth into that which is legally not disposable as dividends and that which is legally disposable as dividends. The latter is called "other surplus." The former is fur-

[43] See *Regulation S-X,* Rule 5-01. 35.

ther subdivided into stated capital and legal reserves. One should note that disposability is used as a criterion of the classification of net worth.

Objectives of the Income Statement

The structure of the income statement prescribed by the Regulation may be shown as follows:

1. Regular Income Section:
   a. Operating Income Section:
      Operating Revenue − Operating Expenses = *Operating Income*
   b. Nonoperating Income Section:
      Operating Income + Nonoperating Revenue − Nonoperating Expenses = *Regular Income*
2. Special Income Section:
   Regular Income + Special Profits − Special Losses = *Income for the Current Period*

   Income for the Current Period + Unappropriated Surplus carries forward from the previous period = UNAPPROPRIATED SURPLUS FOR THE PERIOD

The special profits and losses included in the special income section of the statement include (Article 41):

1. the amount of the liquidations of the voluntarily retained earnings which were applied for original purposes;
2. the amount of the provisions which were applied for other than original purposes; and
3. adjustments to profit and loss for prior periods and extraordinary profits and losses.

Item (3) may be included in the nonoperating section as a nonoperating revenue or nonoperating expense. (Article 42.2)

This statement is similar to the all-inclusive type of income statement, but the two are not quite the same, as the unappropriated surplus and the amount of the liquidations of the voluntarily retained earnings, applied for original purposes, are included only in the former statement. These two items are not income of the reporting period but rather income of prior periods. These special items are included in neither the current operating type of income statement nor the all-inclusive type of income statement.

Indeed, this new and unfamiliar income statement seems very strange viewed in the light of accounting theory. But we should not

hastily criticize this new type of income statement only on this basis. It is important to criticize only after a careful examination of the reasons the Regulation requires the preparation of such a financial statement.

The amount derived by the formula outlined above is the maximum amount which a company can legally approve for distribution. In practice, surplus appropriated for a particular purposes, such as a Reserve for Bonded Indebtedness, is excluded from the distributable profits until the reserves are no longer needed (the bonds in this case being liquidated). Both appropriated surplus and unappropriated surplus amounts are legally a part of the profits available, but optional, for dividends. The former is different from the latter not because of the legal restrictions on its use. In practice, the former is not used for dividends. Therefore, the profit which is actually distributed is the total of (1) income for the period, (2) unappropriated surplus, and (3) liquidations of voluntarily retained earnings which are applied for original purposes. The remainder reported in the income statement prescribed by the Regulation represents this amount.

The income statement attempts to report periodic income. Surpluses of any kind should not be included in it as many represent income of previous periods and others do not represent income at all. The financial statement in which unappropriated surplus and/or liquidations of voluntarily retained earnings which are applied for the original purposes are included is not an income statement in its correct sense. But these items may be described in the earned surplus statement. The income statement of the Regulation is similar to the combined statement of income and retained earnings common in American usage. In the regular income section, net income for the period (which the Regulation designates "regular income") is determined. The entire statement attempts to report the profits available distribution at the general meeting of shareholders. The statement could more accurately be designated as a "statement of profits available for distribution" and not as an income statement. What is important is not the title of the statement but the essence of it.[44]

According to the German Stock Corporation Act, the liquidation of reserves (*Rücklage*), which consists of both legal and voluntary reserves, shall be included in the income statement (Section 157 (1) 30) and "the income on the balance sheet" (*Bilanzgewinn*), which is the

[44] For examples of the financial statements prescribed by the Regulation, see Yukio Fujita, *op. cit.*, pp. 73-75.

final amount reported on the income statement, is distributed to (1) dividends, (2) reserves, (3) additional expenses which the general meeting of shareholders deems to be necessary to retain, such as reserve for income taxes, and (4) profit carried forward to the next period at the general meeting of shareholders. (Section 174 [2]). The income statement prescribed by the German Act represents another attempt to determine the profits available for distribution. One of the differences between the income statement prescribed by the German Act and that of the Japanese Code is that the former includes the liquidation of legal and voluntary reserves for other purposes in the income statement but the latter includes them in a statement pertaining to the legal reserve and to the distribution of profits or interest during construction.[45]

SUMMARY AND CONCLUSION

The accounting provisions of the revised Commercial Code and the Regulation for Corporate Balance Sheets and Income Statements in Japan reveal the following characteristics:

1. The protection of creditors, which is one of the main objectives of the accounting provisions in the Commercial Code, has been strengthened by a reconciliation of the underlying view of the Commercial Code and *A Statement of Business Accounting Principles,* especially by a change in the basis of valuation to historical cost and the introduction of provisions.
2. The concept of assets and liabilities in the Commercial Code, which considers only those legal properties or rights that have realizable value as assets and regards only legal debts as liabilities, has been clarified by the specified division of the sections of assets and liabilities in a balance sheet.
3. The determination of profits available for dividends is one of the chief objectives in law. This concern has been reemphasized by the proposed division of the net worth section of a balance sheet and the contents and form of the income statement prescribed by the Regulation.

The proposition, "different techniques for different purposes," has been applied to the revision of the Japanese Commercial Code and the establishment of the Regulation for Corporate Balance Sheets and Income Statements. Generally speaking, certain limits to the reconcilia-

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[45] For the income statement in the German Stock Corporation Act, see Hans Adler *et al., Die neue Gewinn-und Verlustrochnung* (Stuttgart: C. E. Poeschel Verlag, 1960).

tion of the Commercial Code and accounting principles will exist as long as the proposition is not proved to be incorrect.

The underlying philosophy of the accounting provisions has not been changed by the revision of the Code and the establishment of the Regulation for Corporate Balance Sheets and Income Statements but has been retained in the revised Code and the new Regulation.

Notes on the Evolution of the Statement of Sources and Applications of Funds

KARL KÄFER* and V. K. ZIMMERMAN*

INTRODUCTION

A traveler on the road to his goal pauses from time to time to ascertain what point he has now reached and the path that he has covered. The businessman also annually determines the status of his capital and the particular transactions by which his properties of the previous year have changed to their present status. The same process also holds true for the manager who must periodically account for his stewardship to the stockholders.

The financial position of the enterprise is shown in the balance sheet. It reveals the present in the light of the future, primarily in that the assets are "service potentials" which, in the future, will become goods without any offsetting charges, and in the equities which, in the short or long run, will become goods or service outflows.[1] While the principle of transaction completeness applies to the balance sheet, the income statement also shows the events of the past that have led to the new

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[1] Cf., Karl Käfer, *Theory of Accounts in Double-Entry Bookkeeping* (Urbana, Illinois: The University of Illinois, 1966), pp. 46 ff.

status: from the totality of all the enterprise transactions only certain income affecting transactions are selected and revealed. These are the expenses for the expenditures not fully recovered by revenues, and the revenues whose inflows were not completely offset by expenditures. The distribution of the residual amount, the net profit, will normally be disclosed.

A comprehensive explanation of the remaining transactions, by which an equivalent exchange of current and/or future goods and services occurs, remained required until recently. Especially the so-called financial transactions, in particular financing and refinancing, investing and disinvesting, are certainly of a greater importance. In his *Structure of Accounting Theory,* Professor Littleton noted:

> . . . management exercises a multiple stewardship, financial as well as operating. . . . A duty exists therefore to report on finances as well as on operations . . . financial transactions are important and a report of financial stewardship is very much needed. . . . Unfortunately, however, no clear cut and orderly accounting statement for this purpose has evolved. . . . It is doubtful if an "application of funds statement" . . . fully answer(s) the need (because it) is too complex in organization to be understandable.[2]

This was written in 1953. Since then the funds statement has attained a wider and wider acceptance.[3] It has to a degree become simpler, better understood, and viewed more and more, not only by management, as a managerial tool; today the funds statement is included in the annual reports of more than one-third of all American companies. A similar development is occurring in recent times in Europe even if presently still on a much less significant level.

This article cannot fully evaluate how completely the modern funds statement fulfills Littleton's demands to be an "understandable report on the efforts and accomplishments of financial stewardship responsibilities."[4] That the statement at least partially fulfills this purpose is indicated by its growing popularity. But in a furtherance of Littleton's work, *Accounting Evolution to 1900,* an attempt will be made to sketch several chapters of the history of this statement from its approximate origin in 1900, to the present.

I. DEVELOPMENT IN AMERICA

Origin and First Textbook Discussion

Several articles in the American accounting journals have discussed

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[2] A. C. Littleton, *Structure of Accounting Theory* (Urbana, Ill.: American Accounting Association, 1953), pp. 80 ff. (AAA Monograph No. 5)

[3] See pp. 98-100.

[4] Littleton, *op. cit.,* p. 81.

the origin and development of the funds statement.[5] The history of the funds statement's terms and the methods of its construction were more thoroughly treated by Robert H. Gregory and Edward L. Wallace in their article, "Solution of Funds Statement Problems — History and Proposed New Method."[6] A still more exhaustive treatment of the history of the funds statement is to be found in the several (generally unpublished) doctoral dissertations on this topic.[7]

In all of these and many other studies, the origin of the funds statement is directed back to William Morse Cole and his bookkeeping textbook, *Accounts, Their Construction and Interpretation for Businessmen and Students of Affairs,* either to the first edition, Boston, 1908,[8] or in some cases only to the latter edition of 1915.[9] At the same time, H. A. Finney, in his writings in the early 1920's,[10] and particularly

[5] See, for example:

John N. Myers, "Statements Accounting for Balance Sheet Changes," *The Accounting Review,* XIX, No. 1 (January, 1944), 31-38.

A. B. Carson, "A 'Source and Application of Funds' Philosophy of Financial Accounting," *The Accounting Review,* XXIV, No. 2 (April, 1949), 159-70.

[6] Robert H. Gregory and Edward L. Wallace, "Solution of Funds Statement Problems — History and Proposed New Method," *Accounting Research,* Vol. 3, No. 4 (January, 1952), 99-132.

[7] See for example:

Howard H. Greenbaum, "Fund Flow Analysis in Economic Research" (Columbia University, 1952), University Microfilms, Ann Arbor (Michigan), No. 4187.

Edward J. Schmidlein, "The Funds Statement in Accounting Practice and Collegiate Instruction" (New York University, 1953), University Microfilms, Ann Arbor (Michigan), No. 6279.

Hector R. Anton, "A Critical Evaluation of Techniques of Analysis of the Flow of Business Funds" (University of Minnesota, 1953), University Microfilms, Ann Arbor (Michigan), No. 6369; published under the title *Accounting for the Flow of Funds* (Boston: Houghton Mifflin, 1952).

Jack J. Kempner, "The Statement of Application of Funds in Modern Corporate Accounting Practice" (Ohio State University, 1956), University Microfilms, Ann Arbor (Michigan), No. 18,801.

Robert Leroy Kvam, "A New Funds Statement: A Statement Summarizing Financial Transactions" (Louisiana State University, 1957), University Microfilms, Ann Arbor (Michigan), No. 24,717.

[8] Myers, *op. cit.,* pp. 35 f.; Carson, *op. cit.,* p. 159; Gregory and Wallace, *op. cit.,* pp. 99 f.; Schmidlein, *op. cit.,* pp. 34 f.; Kempner, *op. cit.,* pp. 11 and 17; Kvam, *op. cit.,* pp. 55 f.; Donald H. Corbin, "Proposals for Improving Funds Statements," *The Accounting Review,* XXXVI, No. 3 (July, 1961), 398; Walter B. McFarland, "Review of Funds-Flow Analysis," *The Harvard Business Review,* Vol. 41 (Sept./Oct., 1963), 168.

[9] Anton, *Accounting for the Flow of Funds* (Boston: Houghton Mifflin, 1962), p. 47; Maurice Moonitz, "Reporting on the Flow of Funds," *The Accounting Review,* XXXI, No. 3 (July, 1956), 375.

[10] H. A. Finney, "CPA Examinations, May 1921, Answers," *The Journal of Accountancy,* XXXII, No. 1 (July, 1921), 64-67; "Statement of Application of

in his textbook *Principles of Accounting*, is credited with the introduction of the term "funds" in his text illustrations and its identification in "statements of application of funds."[11]

The origins actually extend still farther back in time. In his research study of railroad financial statements, *Corporate Finance*, Thomas L. Greene presents a "Summary of Changes in the Position of the Company" in which he contrasts the differences in individual balance sheet accounts for two successive years as a "funds statement" or "change statement";[12] in this way liability increases and asset decreases were considered as sources of funds and included, and on the other hand, the asset increases and liability decreases as applications of funds. Greene gave the following example:[13]

Summary of Changes in the Position of the Company

Expenditures:	
for what purpose incurred	
Increase in cost of road	$2,000,000
Increase in cost of equipment	1,000,000
Increase in advances to Rich Valley	600,000
Increase in accounts receivable	200,000
Increase in suspense accounts	100,000
	$3,900,000
Resources:	
whence derived	
Decrease in amounts due from connecting roads	$ 50,000
Decrease in cash and cash items	150,000
Increase in funded debt	2,000,000
Increase in interest due	200,000
Increase in bills payable	1,000,000
Increase in profit and loss	500,000
	$3,900,000

Funds," *The Journal of Accountancy,* XXXVI, No. 6 (December, 1923), 460-72; "The Statement of Application of Funds (A Reply to Mr. Esquerré)," *The Journal of Accountancy,* XXXIX, No. 6 (June, 1925), 497-511.

[11] H. A. Finney, *Principles of Accounting* (1st ed., New York: Prentice-Hall, Inc., 1923), Chapters 25 and 26.

[12] From this nonbookkeeping source, Kurt Schmaltz published his *Bilanz — und Betriebsanalyse in Amerika, in Hinsicht auf ihre Verwertbarkeit für die deutsche Wirtschaft.* Stuttgart, 1927, p. 215. The search for similar works in the same decade was fruitless.

[13] Thomas L. Greene, *Corporate Finance* (New York: G. P. Putnam's Sons, 1897), pp. 106 ff.

Additional indications that the railroads very early in their history included such statements in their annual reports are found in the financial statement commentaries of Werner Mitchell in *The Journal of Accountancy* beginning in 1906. He frequently noted in these reports over-all comments, which included data of all financial statement changes, detailed on the one hand as "receipts" (e.g., from the sale of stock and other equity increases as well as fixed asset and other asset decreases), and, on the other hand, as "disbursements" (e.g., repayment of debt obligations, fixed asset increases, and reductions of reserves).[14] The following example, in which Mitchell was probably the first to use the expression "sources of funds," did not, interestingly enough, come from practice but was the result of his financial statement

The Chicago and Northwestern Railroad

Changes in the Balance Sheet (abbreviated, in 1,000's $)

Purposes for which Expenditures were made:		*Sources of Funds for Expenditures:*	
Increase in Certain Assets		Decrease in Certain Assets	
Cost of property	$ 3,311		
. . .	. . .	Materials, rails, fuel	$ 87
Cost of securities and advances	5,775	Bills receivable	80
		. . .	. . .
. . .	. . .		
Cash on hand	10,234		
Decrease in Certain Liabilities		Increase in Certain Liabilities	
Bonds outstanding	3,862	Common stock outstanding	26,847
. . .	. . .	. . .	. . .
Supply bills	1,350	Equipment renewal fund	1,139
. . .	. . .	Dividends declared	938
Land Income Account	2,973	Railroad Surplus Account	2,317
	$37,209		$37,209

[14] In his commentaries are mentioned: "statements for receipts and disbursements for the year, which account for all the changes in the balance sheet," published by the Chicago, Rock Island, and Pacific Railway Company (*The Journal of Accountancy,* III, No. 2 [December, 1906], 150), by the Union Pacific Railroad Company (*The Journal of Accountancy,* III, No. 4 [February, 1907], 312), by the Southern Pacific Company (*The Journal of Accountancy,* III, No. 6 [April, 1907], 482), etc.

analysis study.[15] He later presented many similar statements in which the asset increases and the equity decreases were combined with the equity increases and asset decreases.[16]

William Morse Cole also presented in his textbook the increase and decrease of balance sheet accounts in the manner of a "funds statement" and stressed that it is essential that the sources and the origin of these open items (real accounts) be shown: "What we are tabulating is not the things got and the things spent, but the *sources* and the *destinations* of the getting and the spending."[17] His manner of presentation was:

Summary of Transactions[18]

Where got	*Where gone*
(or Receipts or Credits)	(or Expenditures or Debits)

Cole asserted that these forms of statements "were practically unknown in published reports until about five years ago."[19] Subsequently they were found in the annual reports of railroads most often under the title "Summary of Financial Transactions."

The unaesthetic title "where got" and "where gone" did not become generally accepted, and Cole later (1921) spoke of "sources of values" and "application of values."[20] This statement found an increasing acceptance in the generally accepted format of the funds statement. The reason for this increasing acceptance was attributable, in addition to other causes, to the American auditors. The examination problems and illustrations originally published in *The Journal of Accountancy* and later in book form by the American Institute of Accountants regularly included problems and solutions of such funds statements. The earliest found by the authors was a problem in the "Examination Questions of the State Board of Ohio" of March, 1910; opening and closing balance sheets and two surplus accounts were given. The candidate was asked to "prepare an account showing what had become of the

[15] Thomas Warner Mitchell, "Reviews of Corporation Reports," *The Journal of Accountancy,* II, No. 6 (October, 1906), 399.
[16] See, for example, *The Journal of Accountancy,* III, No. 5 (March, 1907), 399, for a tabulation of changes in the balance sheets of the International Paper Company.
[17] William Morse Cole, *Accounts, Their Construction and Interpretation for Businessmen and Students of Affairs* (Boston: Houghton Mifflin, 1908), p. 99.
[18] *Ibid.,* p. 101.
[19] *Ibid.,* p. 102.
[20] Myers, *op. cit.,* p. 35.

profits earned in 1909."[21] Already a step beyond the simple funds statement was a problem of the New York CPA examination of 1912; the recommended solution was included in a textbook by Paul-Joseph von Esquerré with a statement titled "Statement of Resources and of Their Application."[22] The statement format followed in the illustration noted earlier was in the form of a balancing account with total amounts: "Resources Obtained" = "Resources Applied." In the CPA examinations problems, various titles for the required statements were given. Instructions of succeeding examinations included the following phrases:

> "Statement showing the funds realized during the year and the disposition made thereof." (November, 1919)
>
> "Statement of resources and their application." (May, 1921)
>
> "Statement of application of funds." (November, 1922)[23]

By this course, the title was found (which was ultimately completed with the word "sources") that has continued to receive general acceptance in the United States to this date. The earlier and already occasionally criticized term "funds"[24] was among those defended by H. A. Finney, the author of the most widely used accounting textbooks in the United States;[25] he did, however, finally come to the conclusion that the term "funds" as well as "resources" could be used (funds seemed to possess a broader meaning than cash; "it is not unlikely that the term 'resources' is preferable").[26]

In the succeeding years a change in the content of the funds statement occurred. The simple listing of all transactions indicating balance sheet account differences in the form of a funds statement was made

[21] "CPA Question Department," *The Journal of Accountancy*, X, No. 5 (September, 1910), 393.

[22] Paul-Joseph von Esquerré, *The Applied Theory of Accounts* (New York: The Ronald Press Co., 1923), pp. 385-88; according to Esquerré, the Insurance Department of the State of New York requires insurance companies to submit a statement of "Income and Disbursements" equalized with the changes of the assets at the beginning to the end of the year; that is a form of funds statement with funds = sum of assets = sum of equities and income = "incomings of assets" and disbursements = "outgoings of assets" (p. 389).

[23] American Institute of Accountants (Board of Examiners), *Examination Questions Prepared . . . for the Examinations from June, 1917, to May, 1921,* New York, 1921, pp. 110 f., and 170 f.; *Examination Questions Prepared . . . for the Examinations conducted from June, 1917 to November, 1927,* New York, 1928, pp. 110 f., 170 f., and 245 f.

[24] Paul-Joseph von Esquerré, "Resources and Their Application" (Letter to the Editor), *The Journal of Accountancy*, XXXIX, No. 5 (May, 1925), 424-30.

[25] H. A. Finney, "The Statement of Application of Funds," pp. 497-511.

[26] *Ibid.*, p. 507.

more informative by the inclusion of important actual transactions, for example, disclosure of the data of fixed assets acquisition and their amortization, as well as that of net income and dividends.[27] In addition, the statement, primarily influenced by the balance sheet format, was divided into two parts: first, a summary of the changes in the current assets and current liabilities under the heading "increase or decrease of working capital ('net current assets')," and, second, clarifying these changes from the changes in all other balance sheets accounts.[28]

At the same time a more precise definition of the term "funds" was developing, i.e., its equation with the term "(net) working capital." The limiting of the term concept "funds" was already evident at the beginning of the twentieth century in the textbooks of J. H. Bliss[29] and J. O. McKinsey.[30] This equating of funds to net current assets was widely accepted in practice; it was attacked, however, by various authors (e.g., W. A. Paton), and the final result is still indeterminate as recently the demands for widening as well as reducing the scope of the term are again being raised.

Quite understandably the funds statement soon came to occupy a new and more prominent place in accounting textbooks. In addition to the works already noted of Esquerré, Finney,[31] Bliss, and McKinsey, the early textbooks of W. A. Paton, H. R. Hatfield, and R. B. Kester[32]

[27] Gregory and Wallace, *op. cit.*, p. 99.

[28] This increase in scope, together with a criticism of the elementary type of statement, was particularly attacked by M. B. Daniels, in the section, "Statement Analysis" of the widely distributed *Accountants Handbook* edited by W. A. Paton (2nd ed., New York: The Ronald Press Co., 1932), pp. 95 ff.

[29] James H. Bliss, *Financial and Operating Ratios in Management* (New York: The Ronald Press Co., 1923), pp. 201 ff.; *Management Through Accounts* (New York: The Ronald Press Co., 1924), pp. 138 ff.

[30] James O. McKinsey, *Managerial Accounting* (Vol. 1, Chicago: The University of Chicago Press, 1924), pp. 253 f.

[31] H. A. Finney, *Principles of Accounting* (2nd ed., Prentice-Hall, Inc., 1928), Chapters 25 and 26; *Intermediate* (3rd ed., Prentice-Hall, Inc., 1946), Chapter 30 f.

[32] William Andrew Paton and Russell Alger Stevenson, *Principles of Accounting* (New York, 1918), Chapter 37; William A. Paton, *Essentials of Accounting* (New York: The Macmillan Co., 1938), pp. 779 ff.; W. A. Paton, *Advanced Accounting* (New York: The Macmillan Co., 1941), p. 391. Statement of Funds, with "Sources from which assets were obtained" and "Utilization of the Assets"; "funds" = "working capital."

Henry Rand Hatfield, *Accounting, Its Principles and Problems* (New York/London: D. Appleton and Co., 1927), pp. 460 ff. Hatfield's first textbook, *Modern Accounting, Its Principles and Some of Its Problems* (New York: D. Appleton and Co., 1909), contains nothing on the funds statement.

Roy B. Kester, *Accounting Theory and Practice* (Vol. 2, 2nd ed., New York: The Ronald Press Co., 1925), pp. 609 ff.; *Advanced Accounting* (4th ed., New York: The Ronald Press Co., 1946), pp. 660, 675.

should be noted. This new type of statement had been mentioned even earlier in the writings of financial statement and business analysts. Their references were often based on the already cited work of J. H. Bliss (1923) and the new works of H. G. Guthmann and S. Gilman (1925).[33]

Funds Statement in American Corporate Reporting

Inclusion of the Funds Statement in the Published Annual Reports and Internal Uses. During the ten years before World War II, the statement of funds received some new attention from American accountants.[34] C. N. Sellie noted that the statement could be important but was little used.[35] Contrary opinions were immediately voiced in an article by G. T. Walker in *The Journal of Accountancy* concerning the "limitations of the statement of funds applied and provided."[36]

That the publication of such fund statements did not remain a specialty of individual American companies but became more and more common is clearly shown by various statistics; this impression is convincing if a sample of American annual reports is studied. If there were only a few companies in the prewar and war periods who published such statements, there was certainly a rapid increase in the postwar period. Sample illustrations are presented in several of the dissertations cited earlier. In the annual reports examined (quite naturally from the best known and larger companies), the frequency of the use of a funds statement in the generally accepted form was 6 per cent in 1945 and 31 per cent in 1954;[37] Schmidlein reports rates of funds statement inclusion of 12 per cent in 1949 and 15 per cent in 1950.[38] John W. Gladson studied the annual reports for 1956 of the one hundred largest American corporations according to *Fortune*, and found 35 funds statements in that number.[39] 35% in 195

[33] Harry G. Guthmann, *The Analysis of Financial Statements* (New York: Prentice-Hall, Inc., 1925), "Interpreting Balance Sheet Changes," pp. 113 ff. Stephen Gilman, *Analyzing Financial Statements* (New York: The Ronald Press Co., 1925), "Application of Funds Statements," pp. 49 ff.

[34] M. B. Daniels, *Accountant's Handbook* (ed. W. A. Paton, 3rd ed., New York: Ronald Press Co., 1943), p. 98.

[35] C. N. Sellie, "Fund Statement Terminology," *The Accounting Review,* XVIII (April, 1943), 160.

[36] J. S. Seidman, "Limitations of the Statement of Funds Applied and Provided," *The Journal of Accountancy,* Vol. 71, No. 5 (May, 1941), 459. He noted that a "discouraging 'effect' would be very unfortunate."

[37] Kempner, *op. cit.,* p. 113.

[38] Schmidlein, *op. cit.,* pp. 90 f.

[39] John W. Gladson, "Reporting on the Source and Use of Funds," *Corporate Treasurers' and Controllers' Encyclopedia* (ed. Lillian Doris), (Vol. 3, Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1958), pp. 922 f.

In the annual publication of the American Institute of Certified Public Accountants, *Accounting Trends and Techniques,* in which 600 annual reports of industrial and commercial firms are analyzed, the frequency rate for funds statements indicated for 1950 was 19 per cent; for 1951, 21 per cent; for 1958, 31 per cent; for 1960, 35 per cent; and for 1965, 76 per cent. Today, at least one-third of the largest American corporations publish such a statement. At the same time only a relatively small number of these are examined by the auditors and included in their certification.[40]

As these statistics indicate, the publication of a funds statement in the United States today is no longer a whim of individual enterprise managements. The statement is now firmly established in modern corporate reporting practice and is still gaining additional acceptance as a much needed third financial statement. This development reveals an additional reason for the reporting of the analysis of annual reports in the commercial press; in the United States the professional advisors are known as security analysts. For a long time this group has requested additional financial information and, therefore, are unanimous in their endorsement of the funds statement. That they unanimously consider this statement as necessary, or at least useful, has been confirmed by the results of various questionnaires. For example, Kempner[41] reports 57 per cent indicated the funds statement to be essential, while 41 per cent certainly said it was useful. Horngren[42] notes that 53 per cent indicated the statement to be always useful, and 35 per cent considered it to be often useful; 60 per cent of Kempner's total sample and 80 per cent of the security analysts questioned by Horngren stated that they would, if they had the power, require such a fund statement as a

[40] American Institute of Certified Public Accountants, *Accounting Trends and Techniques in Published Annual Reports,* New York, 1959, 1961, and 1966:

Statement of working capital, source and application of funds	1950	1955	1958	1960	1965
Covered by Auditors' report	13	21	25	30	207
Not covered by Auditors' report	103	103	160	178	251
Total*	116	124	185	208	458

* As pointed out by Perry Mason in *"Cash Flow" Analysis and the Funds Statement,* Accounting Research Study No. 2 (1961), some of these statements are not really funds statements. Of 197 companies reporting a fund statement in 1959, 190 met Mason's tests, pp. XVII and 47.

[41] Kempner, *op. cit.,* pp. 191 ff.

[42] Charles T. Horngren, "Increasing the Utility of Financial Statements," *The Journal of Accountancy,* Vol. 108, No. 1 (July, 1959), 39.

basic supplement for their study of the balance sheet and income statement.[43]

All research efforts in the United States indicate that the statements of sources and application of funds are much used by the firms themselves even when the statement is not included in the annual report. The compelling reasons which have existed for many years are given in the comprehensive and rewarding studies of the results of the several dissertations cited earlier. H. R. Anton noted that already at the time of his study two-thirds of the responding corporations (by the largest 94 per cent) used a fund statement, but in only 19 per cent of the cases presented such a report to their stockholders.[44] The reasons for this practice were that the statement was too technical and too statistical or that it would find too little interest from the shareholders and thus unnecessarily expand the annual report.[45] In the majority of the cases the statement was only used internally — as is still the case in many instances. The statements are also required in some cases by governmental agencies as a report of the changes of the financial situation, as a projection in the future as a basis for decisions concerning financing and investment decisions.

A funds statement is often included in the American auditor's report. As early as 1935 Porter and Fiske reported: "it forms a part of most audit reports."[46] According to the research of J. J. Kempner,[47] this had risen to one-third in 1945; this had increased to two-thirds of the audit reports by 1955 whenever "long-form reports" were prepared (usually the case for the auditors of smaller firms). It was also revealed that the leading auditing firms have regularly included for some time a long-form report which includes a funds statement.

The funds statements also play an important role in the credit transactions by American banks. Of the approximately 200 bank loan offi-

[43] Alan Robert Cerf, *Corporate Reporting and Investment Decisions* (Berkeley: The University of California, 1961). He reported the results of his research to be: "A strong demand for the source and application of funds statement as evident from our study." Of two-thirds analysts who answered this question, 97 considered it (the presentation of a funds statement) a major improvement, 97 considered it a desirable improvement. . . ." pp. 83 f.

[44] Anton, *op. cit.*, p. 80. These totals have risen since then. According to a study published in 1961, of 60 smaller West Coast companies, 40 prepared the funds statement and 19 of these also reported it to the shareholders. The corresponding totals in Anton's study were approximately 26 and 4. Donald A. Corbin, *op. cit.*, p. 400.

[45] Schmidlein, *op. cit.*, p. 111.

[46] Charles H. Porter and Wyman P. Fiske, *Accounting* (New York: H. Holt and Co., 1935), p. 547.

[47] Kempner, *op. cit.*, pp. 132 ff.

cers who answered Kempner's questionnaire,[48] three-fourths of them indicated that such statements revealed the causes for changes in the net profit and were viewed as important for decisions concerning a credit transaction; the bank officers themselves often prepared such statements if they were missing.[49] The other loan officers indicated they always considered the funds statement to be useful.

The Fund Statement as Discussed in American Literature and Its Recent Development

The discussion concerning the contemporary position of the funds statement in American financial reporting practice became particularly vigorous after World War II. In *The Journal of Accountancy*, but more particularly in *The Accounting Review*, authors concerned themselves again and again with the statement of sources and application of funds. According to Schmidlein,[50] the topic was discussed in approximately one-half (10 of 21) of the elementary accounting textbooks, in all advanced texts (19 of 19), and in nearly all works (9 of 10) of specialized nature. The funds statement is also generally included in the intermediate and advanced accounting instruction.[51] The statement of sources and application of funds is also included in the well-known accounting handbooks[52] and in a particularly comprehensive fashion, in the *Corporate Treasurers' and Controllers' Encyclopedia*.[53]

It must be stressed, however, that despite a more than fifty-year development, an agreement concerning the name, the content, and the form of the funds statement has not yet been reached, and much less a general concept of its theoretical foundations. How should funds be defined? Are they resources of the enterprise? Or is there really no "stock of funds" and are "source" and "application" always equal and inseparable? Is it correct to add the depreciation charges to sources of funds as if there really were not real costs? If, as is usual, the increase of debts is considered as a source of funds, what is the situation in the cases of the increase of tax and other liability amounts?

To resolve such and similar problems, new recommendations are sure to be presented. It is also generally recognized though — and the

[48] *Ibid.*, pp. 170 ff.
[49] Many banks have preprinted forms for this purpose.
[50] Schmidlein, *op. cit.*, pp. 137 ff.
[51] *Ibid.*, pp. 147 ff. (Of 64 responses: included in classroom presentation, six graduate and fifty-eight undergraduate courses).
[52] See, for example: W. A. Paton (ed.), *Accountants' Handbook*, 2nd ed. (1932), pp. 94-101; 3rd ed. (1945), pp. 98-104; Rufus Wixon and Walter G. Kell, 4th ed. (1956), Sec. 2, pp. 53 f and Sec. 3, pp. 25-32.
[53] Gladson, *op. cit.*, pp. 901-50.

manifold statement forms of existing practice prove this — that the funds statement and the status of its development are still incomplete. The theoretical research, as shown in the cited doctoral dissertations,[54] also comes to this conclusion. These indicate either a long series of statements classified according to form and content to clarify[55] or they developed a new type of statement because of dissatisfaction with any of the existing ones.[56] These dissertations indicate that accounting instruction in America in the last ten years has busied itself vigorously with this contemporary situation, but the studies also indicate that the previously proposed theoretical and practical solutions are not satisfactory.

Still other authors have researched the previous types of the funds statement and have suggested changes or new types of statement forms. William J. Vatter has deeply concerned himself with the theoretical considerations, particularly in his book, *The Fund Theory of Accounting and its Implication for Financial Reports,*[57] and also in several articles.[58] He suggests the title "Summary of Transactions Effecting the Net Working Capital Position" and indicates with this title very clearly the content of his statement with emphasis on the many definitions of the term funds. Finney and Miller wish to reverse this concept but do not present a final definition.[59] A "Statement of Financial Transactions" was suggested by R. K. Mautz in his monograph *An Accounting Technique for Reporting Financial Transactions.* He also agreed that the "activities" were not adequately reported previously;[60] for that reason he suggested two new statements: a "statement of enterprise growth," that reveals the increases and decreases of enterprise properties, and a "statement of financing" that indicates the beginning and ending equities as well as the nature and size of finance costs; both statements can be combined into a statement of financial transactions.[61] While R. K. Mautz, as well as H. R. Anton and R. L. Kvam, suggested new types of statements, other researchers were busy attempting to im-

[54] See p. 91.
[55] Schmidlein, *op. cit.,* pp. 51 ff.; Kempner, *op. cit.,* pp. 99 ff.
[56] Anton, *op. cit.,* pp. 104 ff.; Kvam, *op. cit.,* pp. 117-26.
[57] William J. Vatter, *The Fund Theory of Accounting and Its Implications for Financial Reporting* (Chicago: University of Chicago Press, 1947), pp. 78-93.
[58] Examples are: William J. Vatter, "Fund Flows and Fund Statements," *Journal of Business,* January, 1953, 15-24; and "Fund-Theory of Price Level Adjustments," *The Accounting Review,* XXXVII, No. 2 (April, 1962), 189-207.
[59] H. A. Finney and H. E. Miller, *Principles of Accounting — Intermediate* (New York: Prentice-Hall, Inc., 1951), pp. 648 ff.
[60] R. K. Mautz, *An Accounting Technique for Reporting Financial Transactions* (Urbana: University of Illinois, 1951), p. 11.
[61] *Ibid.,* pp. 60, 62, and 65.

prove the conventional format of the fund statement, in particular with the description of their contents and the definition of the term funds thereby implied. The meaning in business usage, as well as in funds statement, had many different meanings which "gives rise to considerable argument and confusion."[62] For this reason Louis Goldberg suggests it is desirable "to have a concept of funds which will prove satisfying in all cases."[63] The conventional restriction of the term to the net current assets often conceals important changes in the current assets and liabilities.[64]

The most frequent and most penetrating critics believe, however, that they are able to identify a certain lack in the previous capital flow accounting:

> a concept broader than that of working capital should be used . . . so that the statement will include the financial aspects of all significant transactions, e.g., "non-fund" transactions such as the acquisition of property through the issue of securities.[65]

On the other hand, many writers see a solution with the acceptance of a comprehensive concept of the word "funds."[66]

This enlarged concept of funds is unfortunately seldom given exact boundaries; almost always the purpose of the related balance sheet accounts is missing. To repeat the oldest description,[67] the contents of the funds are postulated: resources of the enterprise, or the "financial resources," or also "all assets."[68] A similar enlargement of the concept is intended, if it is accepted, that funds include the "properties," or the "business values."[69] Probably the least clear is the long-desired equa-

[62] *Ibid.*, p. 74. Also, Vatter, "Fund Flows and Fund Statements," p. 17.

[63] Louis Goldberg, "The Funds Statement Reconsidered," *The Accounting Review*, XXVI, No. 4 (October, 1951), 485.

[64] Perry Mason, *"Cash Flow" Analysis and the Funds Statement*, p. 55.

[65] American Institute of Certified Public Accountants, "Opinion of the Accounting Principles Board," *The Journal of Accountancy*, Vol. 116, No. 5 (November, 1963), 67.

[66] Mason, *op. cit.*, p. 54.

[67] W. M. Cole, 1908, *op. cit.*, "resources"; Esquerré (1914), *op. cit.*, "resources."

[68] Donald A. Corbin and Russell Tausseg, "The AICPA Funds Statement Study," *The Journal of Accountancy*, Vol. 114, No. 1 (July, 1962), "funds include all resources"; "Opinions of the Accounting Principles Board," 1c., "funds . . . can be . . . defined as "all financial resources," (p. 67); C. A. Moyer and R. K. Mautz, *Functional Accounting (Intermediate)*, (2nd ed., New York/London: Wiley, 1951). "the statement of resources provided and applied . . . deals with all the assets owned." (p. 458).

[69] Billy E. Goetz and Frederick R. Klein, *Accounting in Action* (Boston: Houghton Mifflin, 1960), p. 325.

Richard L. Smith, *Management Through Accounting* (Englewood Cliffs, N.J.: Prentice-Hall, 1962), p. 168.

tion of funds with the "purchasing power" of the enterprise.[70] These and similar attempts to define the nature of the term funds were quite properly criticized because of their uncertainty.

The difficulty to find a limit to the term "fund" that would satisfy everyone led several authors to avoid the attempt completely of defining a fund. That the preparation of funds statements without limiting it to a portion of the balance sheet accounts (e.g., the working capital or also cash) as a special fund is possible, had already been indicated by the oldest illustrations of this type. In the statement of balance sheet changes by Greene, Mitchell, and Cole reproduced earlier,[71] no funds are separated. The suggestions led to the strict return to the simple form of the purpose of the balance sheet account differences; in their place the transactions of asset and liability changes noted are presented. In contrast to the funds statements is the statement of financial transactions.[72]

An article by Louis Goldberg published in 1951 has attracted considerable attention. To provide support for the idea that an expansion of the concept of funds must be broadened, Goldberg explains:

"take the case of a partner who increases his proprietary interest in the firm . . . by contribution . . . an automobile. Surely he has contributed "funds" in terms of the funds statement, but not a current asset. . . . A creditor from whom plant is purchased provides a non-current asset, . . . but . . . "funds" are nonetheless something provided by the creditor."[73]

Yet, these are not to be viewed as something substantial, but rather much more as dynamic, as motion; a status of funds is not indicated:

the term "funds" . . . is intended to indicate a notional concept equivalent to the *flow* of resources; . . . the fact the *all* funds derived during a period have been applied somehow during the period suggests that there is never any pool of funds. . . . There is never any "reservoir" of funds . . . what appears to be often overlooked is the dynamic character of funds.[74]

Since then, many others have argued against the search for a "pool

[70] Frank Hatch Streightoff, *Advanced Accounting* (New York/London, 1962), funds — "purchasing power measured in dollars," (p. 215); H. S. Noble, W. E. Karrenbrock, H. Simons, *Advanced Accounting* (Cincinnati, etc., 1941), funds — "purchasing power . . . in assets owned and credit incurred"; Donald A. Corbin, *op. cit.*, p. 401, funds — all assets — "purchasing power"; Walter B. McFarland, *op. cit.*, p. 168, "flow of funds — freely disposable purchasing power."

[71] See pp. 92-94.

[72] M. A. Binkley, "Components of the Report of Financial Changes," *The Accounting Review,* XXIII, No. 3 (July, 1949), 304-7.

[73] Louis Goldberg, "The Funds Statement Reconsidered," *The Accounting Review,* XXVI, No. 4 (October, 1951), 485-91.

[74] *Ibid.,* pp. 489 ff.

of funds." Corbin states: "the concept of a pool which changes in size should be completely discarded."[75] The funds statement does not show the changes "in an enterprise's mythical stock of funds."[76] In this concept, the funds statement becomes nothing more than a summary of the changes from certain or all balance sheet accounts, and a statement of certain balances of the previous years. "Funds are the resources with which an enterprise operates, but they exist only insofar as they flow in or out . . . a flow of funds is a simultaneous acquisition."[77]

Using this concept, the accounting funds statement of the enterprise comes much nearer the concept of the economists and statisticians as the flow of funds in their area of economics. For some time, economics has been concerned with flows of funds and to some degree has countered the results of the accountants. By changing the format of the data published by corporations, significant points concerning the financial and investment operations of the corporations on the total economy (e.g., on the development of competition by business) are revealed.[78] Particularly important are the *Studies of Money-Flows in the United States* (1952), widely publicized because of a contract with the Board of Governors of the Federal Reserve System and published as *Flow of Funds in the United States 1939-1953.* Applying all the tools which the field of statistics allows, Copeland attempts to present "all transactions in the economy that are affected by a transfer of credit and/or money."[79] Thereby the total economy is divided into ten sectors for each of which an accounting of sources and uses of funds is prepared (e.g., consumers, farm businesses, and corporate business except farms). The flow of funds is described as "all transactions which (1) involve at least two separate economic units, and (2) are affected through transfers of credits and money."[80]

Similar studies by Friedrich A. Lutz, *Corporate Cash Balances, 1914-43, Manufacturing and Trade* and *Industrial Demands upon the Money Market, 1919-57: A Study in Fund-Flow Analysis,* also concern themselves with the "fund-flow analysis" and utilize it as a basic statement, much as the funds statement of corporations, though, in part,

[75] Corbin, *loc. cit.*
[76] John P. Powelson, *Economic Accounting* (New York: McGraw-Hill, 1955), p. 75.
[77] *Ibid.*
[78] Greenbaum, *loc. cit.;* Anton, *A Critical Evaluation of Techniques of Analysis of the Flow of Business Funds,* pp. 197 ff.; *Accounting for the Flow of Funds,* pp. 107 ff.
[79] Morris A. Copeland, "Social Accounting for Moneyflows," *The Accounting Review,* XXXIII, No. 3 (July, 1949), 254-64.
[80] *Ibid.,* p. 7.

with a new content. For example, Payne suggests four different funds statements to show (1) financing cash requirements, (2) financing total assets, (3) financing working capital, and (4) financing capital formation. In all of these illustrations, a greater importance is laid on the presentation of the money flow, a tendency which is also revealed in the latest development of the funds statements of corporations.

Although in current practice, in the vast majority of the funds statements, the increase and decrease of the net working capital is considered as either a source or application of funds, this thesis has been occasionally contested in sharp relief to the contrasting flows presented previously — the fund should be sharply restricted. To include the inventories and accruals in the definition of funds, says Paton, "is hard to swallow"; in his latest article concerning this topic, he suggests excluding most types of inventory from the concept of "funds" in building up a full fledged funds statement.[81] Carson is of the same opinion.[82] Even earlier Moonitz had contested this still widely held view that funds should be viewed only as the cash, short-term payables, and receivables.[83] In a later article Carson also comes to this conclusion.[84]

Practice has not completely followed, however, this partial adjustment of the concept of funds. As long as it did not remain with the concept of working capital, which was the view of the majority, it went further and identified the fund with cash and led to the cash-flow statement. This concept had also been recommended earlier. In 1931 W. E. Dickerson and J. W. Jones disputed the belief that the funds were to be equated with cash.[85] Hiram T. Scovill stated that "fund"

[81] William A. Paton and William A. Paton, Jr., *Corporation Accounts and Statements, An Advanced Course* (New York: Macmillan, 1955), p. 441 f.;
William A. Paton, "The 'Cash-Flow' Illusion," *The Accounting Review,* XXXVIII, No. 2 (April, 1963), 249.

[82] A. B. Carson, *op. cit.*, p. 159. ". . . the writer agrees . . . on the matter of excluding inventories."

[83] Maurice Moonitz, "Inventories and the Statement of Funds," *The Accounting Review,* XVIII, No. 3 (July, 1943), "funds (maximum) = cash + short term receivables + highly marketable securities — short term payables" (p. 363); "Reporting on the Flow of Funds," *The Accounting Review,* XXXI, No. 3 (July, 1956), . . . "useful . . . is the concept of net money assets available for disposition" (p. 397).

[84] A. B. Carson, "A Fund-Change Statement Approach to the Calculation of Inflationary Distortion in Conventional Income Measurement," *The Accounting Review,* XXIX, No. 3 (July, 1954), 376.

[85] W. E. Dickerson and J. W. Jones, "Some Observations on the Statement of Application of Funds," *The Accounting Review,* VI, No. 4 (December, 1931), 277 f.

was practically synonymous with cash.[86] Ten years later, Emmett B. Day noted a series of advantages when funds were viewed as cash rather than as working capital;[87] his views, however, were not without their detractors.[88]

Systematic summaries showing the cash receipts and disbursements of a business have been quite common since the time of European *Kammeralistik,* i.e., the accounting method developed on the cash basis for public businesses and enterprises.[89] The form of the fund statements prepared from the yearly statements and published in the annual reports of the corporations is new, however. Mason writes: "In recent years, a sizeable proportion of the annual reports of industrial corporations have presented statistics . . . , which apply the . . . cash-flow concept."[90] In 600 annual reports of the year 1959, "a group of 39 companies . . . presented information of this sort."[91] The increasing use of such cash flow statements caused the National Association of Accountants to treat the problem in a research report. This study revealed:

"that top management is strongly interested in . . . information showing source and applications of this cash flow. . . . In contrast with cash flow statement, . . . statements of sources and applications of working capital . . . are apparently viewed as informational reports and not as working tools of financial management."[92]

In addition to the many reasons that undoubtedly exist for the inclusion of cash flow statements, a tendency encouraged by security analysts to report a new type of "profit" in the annual report also developed which was called "cash profit" or "cash flow earnings." This amount is computed as net income plus depreciation, also possibly including other noncash disbursements such as deferred taxes. With the preparation of the funds statement, it is possible to determine this amount; it simply involves a simple addition of the amounts given in the statement. The identification of this amount as profit is defended partially by the belief that the depreciation charge is often too large. This, however, does not justify the view that the revenue amount before

[86] Hiram T. Scovill, "Application of Funds Made Practical," *The Accounting Review,* XIX, No. 1 (January, 1944), 21.
[87] Emmett B. Day, "Cash-Balance Approach to Funds Statements Promotes Clarity in Financial Reports," *The Journal of Accountancy,* Vol. 91, No. 4 (April, 1951), 600.
[88] *The Journal of Accountancy,* Vol. 93, No. 2 (February, 1952), 156.
[89] See pp. 117-20.
[90] Mason, *op. cit.,* p. 16.
[91] *Ibid.*
[92] National Association of Accountants, *Cash Flow Analysis for Managerial Control,* Research Report No. 38, pp. 58 f.

the subtraction of depreciation represents the actual profits. Leading American accountants have, therefore, quite properly argued against the use of this method in the annual reports even as the AICPA has with its Accounting Principles Board.[93]

Even if it is indicated by this study of its development that this statement is not recognized by everyone and is still in part disputed, there is no question that its importance in the United States is large and is increasing. As major reasons Holzer and Schönfeld identify the influence of financial analysts, the income tax allowance of higher depreciation, the inflationary development, and the increasing awareness of the importance of financial liquidity.[94] In this manner the research report of the American Institute of Certified Public Accountants, supported by the Accounting Principles Board of that organization, arrived at the recommendation also approved by many other accountants that the funds statement should be accepted as the third most important statement in all annual reports after the balance sheet and the income statement.[95]

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[93] Everett J. Mann, "Cash Flow Earnings — New Concept in Security Analysis, *The Accounting Review,* XXXIII, No. 3 (July, 1958), 424 ff. ". . . 'cash flow earnings' is a misnomer . . . and a general misunderstanding by everyone concerned."

Carman G. Blough, " 'Cash Flow Earnings' — A Dangerous Concept," *The Journal of Accountancy,* Vol. 106 (October, 1958), 77 ff.

Edward Wilcox, "Cash Flow Analysis," *The Journal of Accountancy,* Vol. 111, No. 5 (May, 1961), 37, "an implication . . . that omission of a depreciation charge provides a significant income figure . . . is a step backward to about the turn of the century."

J. S. Seidman, "Cash Flow Concepts," *The Journal of Accountancy,* Vol. 111, No. 6 (June, 1961). "The cash flow idea proceeds on the highly erroneous implication that allowance for depreciation is not really a charge to earnings."

Mason, *op. cit.,* pp. XV, and 42. "In no sense . . . can the amount of 'cash flow' be considered to be a substitute for or an improvement upon the net income, properly determined, as an indication of the results of operations. . . ."

American Institute of Certified Public Accounts, "Opinions of the Accounting Principles Board," No. 3, *The Journal of Accountancy,* Vol. 116, No. 5 (November, 1963), 67. " 'Cash flow' and related terms should not be used in annual reports in such a way that the significance of net income is impaired, and 'cash earnings' or other terms with a similar connotation should be avoided."

William A. Paton, "The 'Cash-Flow' Illusion," *The Accounting Review,* XXXVIII, No. 2 (April, 1963), 244. ". . . it is distressing to witness the new wave of confusion, misinterpretation, and downright inaccuracy."

[94] H. Peter Holzer and Hanns-Martin Schönfeld, "Die Bewegungsbilanz als Bestandteil des veröffentlichten Jahresabschlusses in den USA," *Wirtschaftsprüfung* (November, 1962), p. 559.

[95] Mason, *op. cit.,* p. 90. "The funds statement should be treated as a major financial statement. It should be presented in all annual reports of corporations covered by the auditors' report."

The movement to prepare statements concerning the condition of liquidity has also influenced English-speaking regions other than Europe, namely Canada and Australia. A report published by the Canadian Institute of Chartered Accountants, *Financial Reporting in Canada*, indicates that for the years 1953 to 1956 a significant total number, as well as a rapid rate of increase, of annual reports containing a funds statement: of 300 companies from industry and commerce 49 (16 percent) in the year 1953 and 61 (20 percent) in the year 1956 published a statement of sources and applications of funds.[96]

The development in Australia is apparently less advanced. V. L. Gole write: "It is surely an indication of the painfully slow evolution of accounting thought and technique that the 'Statement of Funds' does not occupy a more prominent place in accounting practice, particularly in the full range of published accounts."[97] Despite this, R. K. Yorston and E. S. Owens in their book, *Annual Reports of Companies*, could reproduce at least two examples of published funds statements.[98]

II. THE DEVELOPMENT IN EUROPE

In Europe the accounting for capital flows has developed independently and in several different forms but has not nearly achieved the same significance as in the United States. Until recently, European theory and practice indicated only a rare and individual awareness of the American "funds statement." A critical study and comparison of the results of the previous developments on both continents on a broad basis was accomplished for the first time at the 1963 Congress of the *Europäischen Union der Vereinigungen für Finanzanalyse* in Cambridge, England; to be sure, there was not complete agreement concerning form and contents, but there was unanimous agreement on the recommendation that the annual reports of corporations should include an Investment and Financing Table.[99]

Although examples of this statement are available in a substantial number of European countries,[100] the following comments are restricted to a short discussion of the development and contemporary status of

[96] Canadian Institute of Chartered Accounts, *Financial Reporting in Canada* (2nd ed., Toronto, 1957), pp. 5 f.

[97] V. L. Gole, "How Important Is the Statement of Funds?" *The Journal of Accountancy*, Vol. 116, No. 3 (September, 1963), 343 f.

[98] R. K. Yorston and E. S. Owens, *Annual Reports of Companies*, Sidney and other, 1938, pp. 78 ff.

[99] See Harold Rose, "Sources and Uses: A British View," *Journal of Accounting Research*, Vol. 2, No. 2 (Autumn, 1964), 138, 144 f.

[100] An old example from Belgium: Hector Blaison used and recommended a gold-funds accounting ("balance des mutations des valeure en fonction de la

capital flow accounting in England, Germany, and Switzerland as well as its probably earliest examples, which unexpectedly are to be found in *kamerlistischen* bookkeeping.

Funds Statements in Great Britain

In the most common type of the American funds statement, the changes in net profit are reported by a separation of the financial statements, particularly the statement of changes reports in two parts: from those of the one which contains the differences of the current assets and the other which contains all the relatively fixed assets. The preparation of such a divided balance sheet in Great Britain during the last hundred years by the railroads, electrical utilities, and other private service companies was made mandatory. This practice is presently discussed in English textbooks under the heading, "The Double Account System," although somewhat condensed in size in recent years, as the number of such private concerns has decreased sharply with the extensive nationalization of industry.[101]

In this type of accounting system, in a first section, called the "Receipts and Expenditures on Capital Account," on the left side are listed the shareholders investments, bond issues, and long-term secured loans; on the right side are shown the fixed assets purchased by the capital funds. The balance, i.e., the working capital or net circulating assets, is carried to the general balance sheet which contains the other balance sheet accounts. The juxtaposition of the beginning and ending balances in this capital account certain invites comparison with the most frequent type of funds statement noted above. The inclusion of separate capital flow statements by the English corporations in the accounting writings noted above is quite infrequent.[102] In the few textbooks which treat liquidity proof and capital flow accounting,[103] the

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tresorerie") in his textbook, *Cours complet de comptabilite des industries manufacturieres,* Brussels, 1926, p. 29 ff.

A new example from France: Gilbert Riebold, "Un nouveau document financier: L'etat des origines et utilisations du fonds de roulement," *Economie et Comptabilitie* (Paris), reprinted in the Swiss journal, *Courrier du comptable* (July, 1961), pp. 52-56.

[101] See, for example, the comprehensive work of William Pickles, *Accountancy: A Textbook for the Professional Accountant and Advanced Commercial Examinations* (1st ed., London, 1934, pp. 1158-1175; 3rd ed., London, 1960, pp. 1141-1143), designed for the preparation for chartered accountant examinations.

[102] "The idea is very slow in catching on in Britain." Gordon Cummings, "Presenting the Annual Report," *The Accountant,* Vol. 143 (November 5, 1960), 580-82.

[103] See, for example, Vivian H. Frank, *Company Accounts* (2nd ed., London, 1952).

examples are drawn from American practice for that reason. There always are exceptions. To these belong Imperial Chemical Industries, which, for example, published a portion of the following cash flow computation in their annual report of 1963:

Imperial Chemical Industries Ltd.

Cash was absorbed by:	*1963*	*Ten years 1954–1963*
(1) New manufacturing plants and additions and alterations to existing plants	38	406
(2) Additional working capital	4 (decrease)	28
(3) New investments in subsidiaries and in associated companies	15	70
(4) Increase in liquid resources	39	46
	88	550
Cash became available from:		
(1) Sources within the Company		
Profits not distributed	9	112
Depreciation provisions and sums recovered on physical assets sold or demolished	44	264
Temporary use of tax reserves	7	17
Miscellaneous capital receipts	1	9
(2) Sources outside the Company		
Rights issue of new Ordinary Stock to existing Stockholders	..	34
Issues of new Ordinary Stock to employees under the profit-sharing scheme	5	37
Unsecured loan stocks (less repayment) issued for cash	9	61
Sale of Courtaulds, Ltd. 7% Unsecured Loan Stock 1982/87	13	16
	88	550

In the published economic research in England, the "source and use of funds analysis" was also recognized in various ways. An example is furnished by the research of James A. Stewart, "Source and Use of Funds in the Motor Industry," where the method of converting to the postwar economy for the years 1944-48 for the five largest firms is shown.[104] Since the new Companies Act in 1948 made mandatory the preparation of more complete annual reports and consolidated balance

[104] James A. Stewart, "Source and Use of Funds in the Motor Industry," *Accounting Research,* III (July, 1952), 252-63.

sheets, the reworking of the enterprise statistics for the purpose of economic analysis became useful. As Brian Tew and R. F. Henderson explain, the preparation of the yearly investment and financing transactions and other important transactions are first to be shown for every company in a sources and use of funds statement.[105] By consolidating the data conclusions (according to industry groups, enterprise size, etc.), concerning the degree of self-financing in individual businesses, the relationships between growth rates and capital size, as well as additional important conclusions for economic policy, may be reached. Not unexpectedly, these authors close with the wish that the companies in the future regularly would include a funds statement in their annual reports.[106]

Cash Flow Statements and Other Funds Statements in Germany

Other than in the United States, the supplement of traditional accounting with liquidity studies and other capital flow computations is found nowhere so frequently as in Germany, particularly in the last few years. Funds statements are being included with increasing frequency in published annual reports.

In Germany,[107] the expected impact of the financial comments of the commercial press [108] and the textbooks for financial statement analysis is lacking. One may refer to Friederich Leitner's *Bilanztechnik und Bilanzkritik,* which was published about 1920 and appeared in several editions. Leitner prepares, for example, from three successive balance sheets of a brewery, a statement of changes, and draws suggestions from them of the source of new capital and its expenditure for fixed asset additions and debt repayment.[109] German thought, however, was not

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[105] Brian Tew and R. F. Henderson (eds.), *Studies in Company Finance, A Symposium on the Economic Analysis of British Company Accounts* (Cambridge, 1959), p. 1 f.

[106] *Ibid.,* p. 259.

[107] The form used by the German writers is illustrated by Werner Guishamp, *Der Liquidatätsausweis* (Dissertation, University of Zurich, 1957), pp. 45-67. Compare with the explanation of the development by Gunter Flohn, *Die Zeitraumbilanz* (Berlin, 1963), pp. 21-36; his comments concerning the priority demands are interesting if one views the entire development of the funds statement.

[108] In the *Handwörterbuch der Betriebswirtschaft* (Vol. 1, 3rd ed., Stuttgart, 1956, sp. 1164) Le Coutre refers to the financial statement studies of the business newspapers, in which the balance sheet differences were summarized and reported as sources and applications of funds long before Bauer did so. Le Coutre in his *Praxis der Bilanzkritik* (Berlin/Wien, 1926, Vol. 1, p. 93 ff; Vol. 2, pp. 275, 314, 326, and 347) remained by his determination of the balance sheet differences without interpreting them as sources and application of funds.

[109] Friederich Leitner, *Bilanztechnik und Bilanzkritik* (6th and 7th eds., Berlin/Leipzig, 1923), pp. 119-202 and 207 f.

based on this pioneer alone. It was also not dependent upon the American development, although this was thoroughly and carefully explained by K. Schmaltz in his *Bilanz-und Betriebsanalyze.* (Schmaltz viewed the funds statement as a summary of capital changes.) German theory was influenced much more by an article by W. Bauer[110] concerning the cash flow statement. This study has facilitated in the last twenty years the preparation of many other useful research works concerning the origins of the need to prepare a sources and application of funds statement. To be sure, Bauer purposely goes from the statement of sales (in clearly defined accounts) but, through a comparison of expenditures and receipts, finally comes quite close to the American form mentioned earlier.[111] He also wishes to show the application of the profit as well as the financing and disinvesting resources with his cash flow statement.

In the succeeding years, Max Rudolf Lehmann, Konrad Engelmann, and Rudolf Johns advocated similar statements. Lehmann combines the balance sheet receipts and expenditures accounting.[112] Engelmann suggests, in his *Methodik der banksmässigen Kreditkontrolle,* statements of changes in which he combines the asset increases and liability decreases as financial achievements of the period, and correspondingly, asset decreases and liability increases as applications of the resources with which the achievements were accomplished.[113] Johns in 1938 further suggests, within the framework of government cash-basis bookkeeping, the preparation of similar financial analyses statements for public companies.[114]

The most significant of the succeeding publications is probably that of Ernst Walb, *Finanzwirtschaftliche Bilanz.* He presents several illustrations from practice that serve the suggested purposes and names them financial "identification points." By a rearrangement, he returns to the funds statement of Bauer, which to him appears the most complete form of these dynamic financial statements.[115] The earlier funds statements of this type in the United States were unknown to him.

[110] W. Bauer, "Die Bewegensbilanz und ihre Anwendbarkeit, insbesondere als Konzernbilanz," *Zeitschrift für handelswissenschaftliche Forschung,* 1926, pp. 484-544.
[111] Grieskamp, *op. cit.,* p. 61 ff.
[112] Max Rudolf Lehmann, "Dreikontentheorie," *Zeitschrift für handelswissenschaftliche Forschung,* 1925, p. 341 ff.; *Allgcmeine Betriebswirtschaftlshehre* (2nd ed., Nürnberg, 1948), p. 193.
[113] Konrad Engelmann, *Methodik der Bankmässigen Kreditkontrolle* (Berlin, 1935), p. 61.
[114] Rudolf Johns, "Die Vollrechnung der Gemeinden," *Zeitschrift für handelswissenchaftliche Forschung* (1938), pp. 145 ff. and 193 ff.
[115] Ernst Walb, *Finanzwirtschaftliche Bilanz* (1st ed., 1943; 2nd ed., 1948, Duisburg), p. 45 ff.

At approximately the same time, Erich Kosiol demonstrated that the statement of changes (funds statement) can be viewed as a further refinement of profit-loss accounting.[116] Somewhat later, J. Nertinger devoted a special study to this "financial picture of the business."[117]

The discussion engendered by the funds statement in the form of the cash flow statement has remained very active in Germany. In the article, "Bewegungsbilanz," in the new edition of the *Handwörterbuch der Betriebswirtschaft,* Hanns-Martin Schönfeld could note an extensive bibliography.[118] In the journal, *Der Betrieb,* for the years 1951-1954, R. Verhulsdonk, S. Rentrop, B. Uhlig, K. Klinger, and others discussed the presentation of the business financial activity in the funds statement. A further significant refinement is shown by H. Neubert in his schedule which portrays the financial flows of the enterprise.[119] This money flow is derived from the opening and closing balance sheets with the addition of the income statement, separated and divided as shown in the annual reports of the enterprise.

In a theoretical work, Hans Ruchti discusses the funds statement as exchange transactions of an expanded income calculation with the employment of the fiction, that the computed business income is purely a monetary calculation.[120] Hans Seischab discusses the funds statement under the heading of a capital statement in his investigation of the investigation of the investment of West German industry.[121] In two recent articles, Carl Ruberg studies the actual usefulness of such presentations, so far as they may be separated from the published annual reports. He calls them the "external change statement" and attempts to combine them anew under the headings of real and fictitious resources flow, such as simple transfer transactions, value changes, etc.[122]

[116] Erich Kosiol, *Bilanzreform und Einheitsbilanz* (2nd ed., Berlin/Stuttgart, 1949), p. 56 f.

[117] J. Nertinger, *Das Finanzbild des Betriebes: Finanzierung und finanzielle Entwicklung* (Stuttgart, 1950).

[118] Hanns-Martin Schönfeld, "Bewegungsbilanz," *Handwörterbuchs der Betriebwirtschaft* (Vol. 1, Col. 1048-1054).

[119] H. Neubert, *Wirtschaftsprüfung,* 1952, pp. 422-25; "Money Flow and the Firm," *The Accounting Review,* XXXIV, No. 1 (January, 1959), 84-90.

[120] Hans Ruchti, *Zeitschrift für handelwissenschaftliche Forschung,* 1955, pp. 499-520.

[121] Hans Seischab, "Die Investionspolitik der deutschen Industrie won 1948 bis 1954," *Zeitschrift für Betriebswirtschaft,* 1956, pp. 65-87.

[122] Carl Ruberg, Externe Bilanzänderungsrechnung zur Beurteilung der Mittelbeschaffung and Mittelvervendung in der Unternehmung, "*Zeitschrift für Betriebswirtschaft,* 1960, pp. 470-80; "Gliederung der Ergebnisse einer externer Bilanzänderungsrechnung," in *Gegenwartsfragen der Unternehmung* (Festschrift fur Fritz Hensel), Wiesbaden, 1961, pp. 195-212.

Contrary to this division are the proposals of Günter Flohr, who attempts to present the entire flow of values in his statement: he built upon the results of his dissertation (1956), which newly reworked, has recently appeared as a book.[123]

As one can gather from these comments, the development of the funds statement in Germany is still in a state of flux. Yet, far-reaching agreement of the attitudes concerning the possibilities of a "financial picture of applications and sources of payment capital," as Martin Lohmann calls it, is generally quite apparent. "Therewith a person may comment on an area of business managerial policy in a planned manner on tax and control which previously was a very forgotten area" wrote Lohmann in his major work, *Einführung in die Betriebswirtschaftlehre.*[124] And to complete earlier suggestions, Max Rudolph Lehmann suggests the requirement, a funds statement developed by him as a "business receipts and expenditure statement," containing the information of cash reserves, financing, and investing, as the third closing sequence to be generally introduced.[125] He repeats in this article the suggestions made earlier by several American authors. It is certainly uncertain at the present time how far such suggestions will be accepted in German practice.

These suggestions may have already been accepted for internal record-keeping purposes by well-organized firms. The paper by Arnold E. Weber, presented during the 1955 convention of the *Schmalenbach-gesellschaft* (which was devoted to financial planning) is an example of this acceptance;[126] the funds statements included in the practical examples of enterprise planning proposed by the *Rationalisierungs-Kuratorium* of German industry are a further example.[127] Funds statements are also prepared by the German postal service.[128] An article by Heinrich Voss on the reporting of liquidity in the annual reports of industrial firms mentions that many auditors use such statements of

[123] Gunter Flohr, *op. cit.*, Berlin, 1963.

[124] Martin Lohmann, *Einführung in die Betriebswirtschaftlehre* (2nd ed., Tübingen, 1955), pp. 222 f.

[125] Max Rudolf Lehmann, "Die Quintessenz der Bilanztheorie," *Zeitschrift für Betriebswirtschaft*, 1955, pp. 537-52 and 669-88.

[126] The title of the paper was "Principles of Continuous Financial Planning in Medium-Size Industrial Firms," *Zeitschrift für handelswissenschaftliche Forschung*, 1955, pp. 272-77.

[127] See RKW, *Planung und Planungsrechnung in einem Unternehmen der chemischen Industrie.* Praxisbeispiel Nr. 3 zur Unternehmens-planung, Berlin/Frankfurt a.m., 1962, pp. 126-30; *Planung und Planungsrechnung bei Leybold.* Praxisbeispiel Nr. 4 zur unternehmensplanung Koln/Frankfurt a.m., 1962, pp. 52-56.

[128] Schubel, "Funds Statements of the German Post Office," *Der Betrieb*, No. 52/53, 24/31, December, 1952, 1060 f.

resource provisions and application in their reports concerning enterprise liquidity. The popularization of this usage is especially supported by the *Institut der Wirtschaftsprüfer,* in addition to other methods, through the publication of the cited article by Voss and an additional one by Carl-Ernst-Schulz.[129] The latter article also includes work-sheet forms for the computation of monthly funds statements on the basis of intermediate financial statements.[130] The German auditors have become acquainted with the newest American developments through the article of Holzer and Schönfeld noted above.

The significance of the funds statements for the evaluation of business developments is also recognized in the official German statistics: the summary of corporate annual reports, published annually by the German Federal Bureau of Statistics, recently included a "statement of funds" which attempts to report sources and application of funds; both sources and applications are subdivided according to their long or short term nature.[131] With increasing frequency, comments concerning changes in assets and their financing are appearing in the published annual reports. An example is the following illustration which shows obvious similarities with the funds statement of Bauer.[132]

B A S F

Badische Anilin- and Soda-Fabrik AG

Statement of Capital Flows

Application of Funds			*Sources of Funds*		
Purchase of fixed assets	275		Income 1962		144
Additional investments and similar items	37		Depreciation and sales of fixed assets	250	
		312			
Increase of reserves	106		Reduction of inventories	35	
Decrease of liabilities	106		Reduction of receivables	57	
		212	Reduction of cash	137	
Dividends paid		140	Increase of reserves	41	
					520
		664			664

[129] Carl-Ernst-Schulz, *Classification Principles for Financial Reporting* (Düsseldorf, 1955).

[130] *Ibid.*

[131] See, for example, the 1959 study, pp. 6, 8.

[132] Only a few years ago one would only occasionally find such statements in German annual reports (Flohr, *Zeitraumbilanz,* p. 103). This is different today: An examination of the annual reports of eighteen of the largest German corporations showed that in 1962 (or 1961-62) eleven, and in 1963 (or 1962-63) thirteen included fully developed capital flow statements (about two-thirds in the form of a funds statement).

Development in Switzerland

When discussing the literature on the funds statement in Switzerland, one should first mention the study of the funds statement by Frederic Scheurer.[133] He discusses the *"tresorerie de l'enterprise"* and contrasts the fluctuations of cash with the identical changes in the other balance sheet accounts as the causes of the inflows and outflows. On the basis of these comments, Maurice Herschdorfer uses balance sheet differences "not belonging to the liquidity analysis" to "explain the causes of liquidity changes."[134] Another article which appeared in *Buro und Verkauf* in 1948 discussed the "disclosure of liquidity" which particularly considered the American development.[135] In a work that built on this earlier publication, Rudolf Borkowsky[136] characterized the various forms of the funds statement as a special type of income accounting. A detailed explanation of and comparison between the funds statement and the *"Bewegungsbilanzen"* is contained in the dissertation by Werner Grieskamp noted above[137] published in 1957. In the enterprise financial analysis studies of Graf *et al.* and J. Viel "liquidity and financing reports" are treated and examples included.[138] Viel emphasizes that such analyses are well suited for inclusion in the auditors' reports. As his study revealed, such statements are not infrequently included today in the auditors' reports to make financial and liquidity comments more comprehensive. Further evidence for this conclusion is presented by M. Hoessly[139] concerning financial statement analysis and also by the inclusion of this area in the Swiss Public Accountant's Examination.[140] Max Boemle makes specific critical comments on the "cash flow statement."[141] A summary of the history, theory, and use of the funds

[133] Frederic Scheurer, "Cours d'economie commerciale," Neuchatel, 1940-41.

[134] Maurice Herschdorfer, *Zeitschrift für Betriebsführung*, July, 1948, pp. 5 f.

[135] Karl Käfer, "Der Liquiditatsausweis, ein neuer Bestandteil der Jahresrechnung," *Mitteilungen aus dem Handelswissenschaftlichen Seminar der Universität Zürich*, Heft 85, Zürich, 1949.

[136] Rudolf Borkowsky, "Die allgemeine Abschlussrechnung der doppelten Buchhaltung," *Buro und Verkauf*, 1950, pp. 284-88, 320-25.

[137] Grieskamp, *op. cit.*

[138] Adolf Graf, Alois Hunziker, Fritz Scheerer, *Betriebsstatistik und Betriebsüberwachung* (2 Aufl.; Zurich, 1961), pp. 231 ff.; Jakob Viel, *Betriebs-und Unternehmungsanalyse* (2 Aufl.; Zurich, 1958), pp. 293 ff.

[139] Michael Hoessly, "Bilanzkritische Beurteilungen in der Praxis." In *Beiträge aus der Treuhandpraxis* (Festschrift Müller), (Basel, 1961), 9-45.

[140] "Aufgaben zur Vorprüfung," 1960, published in *Schweizer Treuhander*, 1962, pp. 159 and 160.

[141] Max Boemle, "Betriebswirtschaftliche Ueberlegungen zum 'Cash flow'—Begriff," *Die Unternehmung*, Nr. 4 (1962), pp. 199-204.

statement and the "Bewegungsbilanz" is contained in another article.[142] To date however, funds statements are seen only seldom in the published financial statements of Swiss corporations.

Funds Statements in Single Entry and in "Kameralistik" Bookkeeping

To conclude this presentation of the development of the funds statement in Europe, another area needs be noted in which such methods, undoubtedly due to the peculiarities of the bookkeeping system, were first established, even though with certain limitations of content. They are households, clubs, municipalities, and public institutions of all kinds, which usually render accounts in a receipts and disbursements method instead of a profit-loss accounting method; in addition, they include those small manufacturing and trading companies that use the so-called single entry bookkeeping system.

Under single entry bookkeeping, only a few accounts are regularly kept: a cash account, a bank account, perhaps supplemented by accounts receivables and accounts payables and all kept usually in a columnar cash book or a disbursement account journal. Both kinds of ledgers contain, in addition, a number of parallel columns — in the case of carbon records usually replaced by single sheets — in which the amounts of the business transactions, which are entered only *once,* appear within these accounts a *second* time. The debit and credit entries of the complete cash and credit accounts are thus grouped in a manner which facilitates the preparation of classified, meaningful statements: in the receipts column, sales, rental receipts, etc., are entered, and the appropriately classified expenses, fixed asset additions, and drawings are included in the disbursement columns.

The periodic addition of these accounts and columns yields nothing other than a funds accounting, even if not called such in this case: the amounts entered on the debit side of the cash account yield the source of funds in their breakdown in the receipts column or receipts statistics; the amounts entered in the credit side of the cash account are reclassified in the disbursements columns or disbursement statistics in order to show the application of funds. (An example from practice, a small brewery, is on page 119.)

Still less complicated fund statements are the universally known annual accounts for households and clubs; for them the notion of a fund is simply narrowed to that of a money fund; prepared annually or for

[142] Karl Käfer, "Liquiditätsausweise, Bewegungsbilanzen und Kapitalflussrechmungen," *Büro und Verkauf,* 1961-62, pp. 65-70, 109-13, 220-26, 246-55.

shorter periods, these genuine cash flow statements indicate the causes and the results of the receipts and disbursements. If cash is viewed as the only important asset, as is often the case with households, clubs, and other simple record-keeping business units, then the result of the statement (the increase or decrease of cash) is viewed as income or loss at the same time. The modern fallacy of seeing the real income in "cash flow earning" has its ancient precursor in these primitive bookkeeping methods. In Europe, especially in Austria and Germany, a similar form of accounting was developed during the eighteenth and nineteenth centuries for governments and governmentally-owned enterprises — the so-called *Kameralistik* which appears in several forms, but essentially is always a form of cash accounting. All transactions are viewed as changes of the cash fund (this is sometimes broadened to include anticipated receipts and disbursements, i.e., the current receivables and payables). The implementation of these bookkeeping concepts is made possible by simultaneously recording as increases and decreases all transactions that do not actually affect the fund, i.e., so-called clearing entries. The periodic and current grouping of all "receipts" according to the origin of the funds and the disbursements according to the purpose of their disbursement from the funds, required for control and managerial reasons, leads unavoidably at the end of the year to a summary of all sources and application of the fund. The fund statement of this method is a cash flow statement and represents the primary goal and result of this old method of accounting. The calculated increase or decrease of the fund, i.e., the result of the fund statement, can be changed to an income statement by the inclusion of the changes in other accounts (except in the owner's equity); with such a change, this old method of accounting attains the result which is the primary goal of business double-entry bookkeeping today.

This particular method of accounting, still widely employed in Central Europe, deserves special attention in any study of the funds statement. With it, the result of account entries is a presentation of the "cash flow" that is viewed and designated as earnings not only by households and clubs, but also by larger concerns and administrative units. The recent battle of the American accountants against the terms cash profits and cash flow earnings has interestingly enough a completely similar parallel in Europe, even where it is not concerned with the annual results of corporations. In Europe, too, the efforts of the business economists and accountants have not had a full success in clarifying these concepts.

Capital Fund Flow Account

(fund = cash + current receivables − current payables)
(000's omitted)

Sources of Funds (sources*)			*Application of Funds* (applications**)		
Sales	55,020		Purchases of raw materials and supplies	13,250	
− Returns, allowances and taxes	12,720		Refund of custom duties	5,500	
		42,300			7,750
			Wages and salaries		12,100
			Other brewery expenses		9,984
			Purchase of machines	1,100	
			Brewery remodeling expense	1,500	
					2,600
Real estate rental revenue	800		Real estate expense		1,420
Interest	120		Mortgage repayment		1,100
		920	Owner's drawings		5,000
Additional investment by owners		5,800	Loans granted and investments		1,200
Repayment of loans		2,300	Purchase of real estate		2,700
			Total uses of funds		43,854
			Increase of the fund, for example		
			Increase + receivables		
			Decrease − payables		
			Decrease of cash		7,466
Total sources of funds		51,320	Total		51,320

* Sources of funds = second recording of debits in funds accounts (excluding the doubly booked internal exchanges between fund accounts)

** Uses of funds = second recording of credits in funds accounts (excluding internal exchanges)

A method whereby the cash-based reports of a Swiss city are converted to an income statement by the addition of the debt amortization follows:

City M

Account rendered for the year 19. .

Sources of funds		
Tax receipts	3,846	
Income from investments	2,244	
Income from public works	2,062	
Tuition receipts from schools	1,307	
Other receipts	2,328	15,787
Uses of funds		
Interest on debt	1,699	
Amortization of debt	1,137	
Expense of public works	5,724	
School expense	3,054	
Administration and other expense	5,225	16,839
Excess of disbursements (cash flow loss)		1,052
+ Amortization of debts (see above)		1,137
Increase in assets		− 85

CONCLUSION

This study of the funds statement and related reports clearly indicates that the practical applications of this form of reporting in America, as in Europe, are still not satisfactory in many ways and that the research into its theoretical foundations is in no way complete. This uncertain or indeterminate condition is also the reason for the large number of suggestions to change, to redesign, and to rename the statement of sources and applications of funds.

The study by Perry Mason of the Research Division of the American Institute of Certified Public Accountants, and also Report No. 38 of the National Association of Accountants have certainly brought some convincing explanations and also led to some useful practical recommendations. The future developments will certainly be largely based on these reports. The same is true for the future scholarly discussions which have definitely not been made unnecessary by these more practice-oriented publications. That a statement of selected important financial and nonfinancial transactions as a supplement to the two traditional financial statements (the balance sheet and the profit-loss statement) is in principle desirable, even necessary, will probably be quite generally recognized in the very near future.

Whatever contents and forms will eventually prove to be the most valuable for the funds statement, this statement of the future will have to meet the fundamental requirements for a financial statement as formulated by A. C. Littleton in his *Structure of Accounting Theory:*

"Reports . . . should reveal the ebb and flow of activities around the productive cycle of the enterprise. This would enable the reader to see the flow of costs into production factors; the results of the use of production factors; the degree of success achieved in converting product or service into liquid funds; the redeployment of these new liquid funds into different productive factors or in liquidation of debts; all these processes making ready another whirl of capital through the enterprise's production cycle."[143]

To reach these goals, this report of a statement of sources and applications of funds is essential. Together with the balance sheet and the income account, it will serve a highly useful purpose, making clear the real nature of a business enterprise and the economic results of enterprise management.

[143] A. C. Littleton, *Structure of Accounting Theory,* p. 98 f.

Littleton's Views on Social Accounting—an Elaboration

SHAWKI M. FARAG*

The wide intellectual horizons, the broad interests ranging over the various branches of accountancy, and nearly each of them being paid enough attention to leave a lasting imprint, the combination of high accounting skills with a wide knowledge of socio-economic disciplines, the considerable and important bonds between the scholar and the practitioner — all these are characteristics of the works of Professor A. C. Littleton. This paper is restricted, however, to an identification and elaboration of some of Professor Littleton's views on social accounting.

THE PROCESS OF ACCOUNTING EVOLUTION

Professor Littleton conceived of social accounting as "the third phase of the long evolution of accountancy."[1] It is a phase wherein accountancy becomes "a fully effective instrument for social planning in the public interest."[2]

Prior to that, accounting passed through a state where it was either quite unrelated to social control, the first phase, or was a partially

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The writer expresses his gratitude to Professor V. K. Zimmerman for his helpful discussions and remarks concerning the topic of this paper.

[1] A. C. Littleton, "Socialized Accounting," *The Accounting Review*, VIII (December, 1933), 267.

[2] *Ibid.*

effective instrument in that direction, the second phase of its evolution. While in the first phase, accounting data were considered private, secret business records; under the second, accounting data became semi-public as evidenced by the partial sharing of the account data by many enterprises with the general public; finally during the third phase, accounting data became fully socialized data in the sense of a complete sharing of the facts recorded in accounts.[3]

Analyzing these three phases of the evolution of accountancy, Littleton describes the first phase as being the longest. "It consisted of two distinct movements. The earliest was concerned with the formation of the accounting mechanism or methodology — bookkeeping; the latter movement covered the expansion of double-entry methodology to suit subsequent conditions."[4] The undesirable social results of the "bubble" period of stock promotions and the unbelievable speculative orgies of eighteenth century England brought into bold relief the right of society to protect itself from the rampant individualism and unchecked self-interest; this marked the beginning of the second phase of the accounting evolution.[5] At this point the trend toward "the substitution of account data for unrestricted competition as a means of securing economic justice for the various elements of society began."[6]

Littleton, writing as early as the 1930's, recognized the dissatisfaction that existed concerning the adequacy of the existing control which was based upon a partial sharing of business and accounting data. He introduced to the contemporary accounting literature some of the proposals then being discussed in the literature of economics and attempted to investigate the implications of such proposals for accountancy.[7] Littleton, however, was convinced that history would not see a return to wholly private accounts but rather would see a full sharing of accounting data.

One of the contemporary proposals that was thoroughly discussed by Littleton was called "Business Self-Government," implying the relinquishment of direct control over business by business or individuals connected with political government and, in its place, the implementation by business of its own system of self government. Littleton states:

> A good picture of such a "Business Government" would show capital and labor in individual enterprises electing representatives to formulate agree-

[3] *Ibid.*, pp. 267-68.
[4] *Ibid.*, p. 268.
[5] A. C. Littleton, "Socialized Accounting (II)," *The Accounting Review,* IX (March, 1934), 69.
[6] *Ibid.*, p. 70.
[7] *Ibid.*, pp. 70-74.

ments about their mutual problems. It would show these representatives for all the enterprises in one industry uniting to select representatives for the industry who would discuss, with similar representatives for other industries, such problems of business operation and control as were mutual to the related industries. At the top would stand a body to which unsettled questions could be referred — a body of representatives of both capital and labor elected in the same democratic American way and accorded the same understanding support (when deserved) that is accorded political representatives.[8]

Political government would "sit in" with the elected representatives in order to join the voice of the general public with capital and labor, but without thought of dominating. This would go far toward eliminating business measures which were advocated for political purposes and political measures which were supported for business reasons.[9]

The development of input-output accounting as a branch of social accounting permitted the proposal of "Business Self-Government" to be rediscussed in recent years under the heading "consistent forecasting." The basic idea of consistent forecasting is "to make forecasts of the outputs of each industry, the wage rate, and perhaps other variables, in such a way that, if business acts on the basis of the forecasts, they will come true and full employment will be obtained."[10] To be effective, consistent forecasting must be centrally made and widely publicized and made available to everyone interested. It does not follow that it must be controlled or operated by the government. Leontief proposes that consistent forecasts may be performed by an autonomous, non-profit research organization financed partly from private and partly from government funds on a contracted basis. Regional projections would logically be in the hands of the interested state governments, while some of the details regarding industry sectors could well be handled by the appropriate trade and industrial organizations.[11] Consistent forecasting has been practiced in France and has been quite successful.[12]

The problem of consistent forecasting is peculiar to free enterprise economies, such as the United States of America. The need for such forecasts is widely recognized. Clopper asserts:

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[8] *Ibid.*, p. 71.

[9] *Ibid.*

[10] Almon Clopper, "Consistent Forecasting in a Dynamic Multi-Sector Model," *The Review of Economics and Statistics*, XLV (May, 1963), 148.

[11] Wassily W. Leontief, "Proposal for Better Business Forecasting," *The Harvard Business Review*, XXXXII (November, December, 1964), 182.

[12] An interesting exposition of the essence of French planning is presented by: Pierre Masse', "The French Plan and Economic Theory," *Econometrica*, XXX (April, 1965), 265-347; and S. Wickham, "French Planning: Retrospect and Prospect," *The Review of Economics and Statistics*, XLV (November, 1963), 335-47.

I must emphasize, however, that I do not see any invisible hand in the competitive market place (unaided by any sort of consistent forecasting) that can be relied upon to produce smoothly the proper growth of the wage rate.[13]

The problems of the accuracy and validity of such forecasts cannot be solved, however, except with the cooperation of the accountants of all the economic units in the society. By pooling their data and by attempting to coordinate the future decisions of their particular economic units, consistent forecasting is a manifestation of "socialized accounting" in the fullest sense. Since input-output accounting provides the framework within which consistent forecasting can be conducted, the remainder of this will attempt to present a concise presentation of the essential elements of this important field, sensed early by Professor Littleton but assuming an importance only recently.

THE FRAMEWORK OF INPUT-OUTPUT ACCOUNTING

Input-output tables and analyses are a means which allow the description and analysis of the productive process of a complete economic system. On the factual side, they are closely related to national income and product accounts. Present input-output tables may be viewed as the result of the disaggregation of the national production accounts so that the many forms of production may be distinguished. Theoretically, they provide a quantitative model of the varied national productive processes which is susceptible of considerable generalization and, when used with programming methods, enables complex situations involving choice to be analyzed quantitatively.[14]

Research in input-output theory may be divided into two branches: purely descriptive and purely theoretical. The first is concerned with the preparation of input-output tables and the solution of the related taxonomic problems. The second is concerned with the formal relationships that can be derived under various assumptions from the data given in input-output tables.[15]

THE STRUCTURE OF INPUT-OUTPUT TABLES

An input-output table, also called a transactions matrix, describes four principal categories of real flows within an economy: (1) the

[13] Clopper, *op. cit.*, p. 156.

[14] Richard Stone, *Input-Output and National Accounts* (Paris, France: Organization for European Economic Co-operation, 1961), p. 14.

[15] For a comprehensive list of contributions to input-output theory in all languages through 1963, see: Charlotte E. Taskier, *Input-Output Bibliography, 1955-1960* (New York: United Nations, 1961); and Charlotte E. Taskier, *Input-Output Bibliography, 1960-1963* (New York: United Nations 1964).

flows of goods and services between the various industries of the economy (Inter-industry flows), (2) the flows to these industries from the primary inputs (labor, capital, and imported raw materials), (3) the flows from these industries to final destinations (consumption, investment, and exports), and (4) the flows of primary factors to final use (government employment and domestic service). Leontief postulates that the economy consists of a number of interacting industries or sectors. Each industry produces a single good and uses only one process of production to make this good, and it must produce enough to supply the needs of other industries and to meet the final demand.

Usually, input-output data are presented in tabular form (a matrix) in which each industry is represented by a row and a column, each type of final demand by a column, and primary inputs by one or more rows. Each industry row indicates the distribution of that industry's output to itself and to other industries and final markets; the column indicates the consumption of goods and services of the various industries and the value added by this specific industry. Therefore, the basic design of such tables shows, in detail, the divisions of the output of each industry between intermediate and final demand and the corresponding division of inputs into produced and primary ones.

Outputs as well as inputs can be expressed either in physical or monetary terms. If the outputs are expressed in physical units, then the expressions of the various rows of the matrix may be added because the items of any given row are homogeneous, referring as they do to the output of one and the same sector. On the other hand, one may not add the items of the various columns because these items refer to the outputs of different sectors and, thus, are given in different units of measurement. If monetary units are used, however, one may add both the items of the various rows as well as the items of the various columns. In the tables constructed by Leontief,[16] value units measured in constant prices were used and, therefore, the sum of each row was necessarily equal to the sum of each column. In other words, using money as the unit of measurement in an input-output table leads to an accounting identity between each row and column. Such an identity may be expressed for each industry as: value of outputs = value of inputs + value added.

A set of input-output accounts may be expressed as follows. Let an economy be divided into n sectors and denote the output of each sector

[16] Wassily Leontief, *The Structure of American Economy, 1919, 1939* (New York: Oxford University Press, 1951).

per unit of time by X_i $(i = 1, \ldots, n)$. Moreover, let x_{ij} $(i, j = 1, \ldots, n)$ stand for the output which goes from the ith to the jth sector, (inter-industry flows), and Y_i $(i = 1, \ldots, n)$ be the final output or final product of the given sectors. Thus, a set of accounts for the outputs of the economy may be represented by the following system of equations.

$$\begin{aligned} X_1 &= x_{11} + x_{12} + x_{13} + \ldots + x_{1n} + y_1 \\ X_2 &= x_{21} + x_{22} + x_{23} + \ldots + x_{2n} + y_2 \\ &\cdot \quad \cdot \quad \cdot \quad \cdot \quad \cdot \quad \cdot \quad \cdot \quad \cdot \\ X_n &= x_{n1} + x_{n2} + x_{n3} + \ldots + x_{nn} + y_n \end{aligned}$$

or more compactly

$$X_i = \sum_{j=1}^{n} x_{ij} + y_i \qquad (i = 1, 2, \ldots, n)$$

which represents the allocation of the output of each sector in the economy.

Since the total production cost in each sector is equal to the value of inputs purchased from other sectors plus value added in that sector, one may derive the following set of equations corresponding to the various sectors in the economy:

$$\begin{aligned} X_1 &= x_{11} + x_{21} + x_{31} + \ldots + x_{n1} + v_1 \\ X_2 &= x_{12} + x_{22} + x_{32} + \ldots + x_{n2} + v_2 \\ &\cdot \quad \cdot \quad \cdot \quad \cdot \quad \cdot \quad \cdot \quad \cdot \quad \cdot \\ X_n &= x_{1n} + x_{2n} + x_{3n} + \ldots + x_{nn} + v_n \end{aligned}$$

where v_j is the total use of primary inputs (value added) in sector J, this set of equations may be expressed as:

$$X_j = \sum_{i=1}^{n} x_{ij} + v_j \qquad (j = 1, \ldots, n).$$

The equations of the allocation of the outputs and the composition of inputs may be taken as definitions of final demand and the value of primary inputs respectively. Final demand is the difference between the total supply (production plus imports) of a commodity available and the amount used up in production and, thus, includes changes in stocks. The value of primary inputs (value added) is defined as the difference between the value of production in a sector and payments for inputs purchased from other productive sectors. This provides the link between the input-output accounts and the national income and

product accounts. The following partitioned matrix presents a simplified structure of an input-output table:

$$\left[\begin{array}{c|c} x & y \\ \hline v & o \end{array}\right]$$

where x is a submatrix of order n — 1 containing the flows of inter-industry transactions; y is a column vector of n — 1 elements representing final demands, v is a row vector of n — 1 elements representing value added, and o is a scalar.

INPUT-OUTPUT ANALYSIS

An input-output table has been described as a matrix of transactions recording the sales (revenues) and purchases (costs) of the different branches of the economy. To proceed from such an essentially inter-industrial accounting scheme to inter-industry analysis a number of assumptions have to be made. The critical assumption of the entire inter-industry relations approach is that at least some part of any output of the ith sector required by the jth sector in order to carry on its activities will vary with, and depend exclusively on, the level of activity of the jth sector. This is to say that we may represent x_{ij} as a specific and determinate function of X_j, as follows $x_{ij} = F_{ij}X_j$. Therefore, input-output analysis is essentially a theory of production, based on a particular type of production function. Its key relationships are technological, involving quantities of inputs and outputs in productive processes. It does not represent a theoretically complete picture of either the supply or the demand side of the economy in that it does not envision optimizing behavior on the part of economic organisms faced with alternative courses of action.

Since input-output analysis is devoted to empirical investigation, a highly simplified theory of production is assumed which states that: $x_{ij} = a_{ij}X_j$, where a_{ij} denotes the output of industry i required per unit of output by industry j. This is equivalent to saying that any industry always allocates the same proportion of its costs as in the base period to the input it absorbs from other industries, if both inputs and outputs are measured in constant prices. Such a theory of production implies that there are no economies of scale of substitution between inputs. The a_{ij}'s, referred to by Leontief as the coefficients of production, correspond to those originally used by Walras in his first formulation of the general equilibrium theory.

Leontief has proposed that the coefficients of production be interpreted as physical constants, i.e., ratios between physical outputs and physical inputs. Klein observes that although each sector in an input-output table is assumed to produce a single homogeneous output, one finds that joining production is usually the rule rather than the exception and thus the sectors of all input-output tables constructed to date are aggregates whose output can be considered homogeneous only in a limited sense. The non-homogeneity of both inputs and outputs leads to the derivation of the production coefficients from data measured in dollar amounts. The numerator and denominator become weighted averages of the various inputs and outputs respectively (the weights being the prices). Klein suggests that the coefficients be interpreted as value ratios which combine the effects of both changes in relative prices and in quantities. It is argued that such an interpretation of the coefficients can better justify the assumption of the stability of the production coefficients than can the interpretation of the coefficients in physical terms.[17] The merits of Klein's suggestion can hardly be discussed, however, in the absence of empirical observation of production coefficients in both physical and value terms over a period of time.

The assumption of constant returns to scale is contested on the ground that functions more complex than simple proportions are necessary for a realistic description of production processes, particularly in industries such as the railroads and utilities.[18] Evans and Hoffenberg argue, however, that "there are strong *a priori* reasons for supposing near-proportionality for many if not most of these functions over reasonable if limited periods of time."[19] This assumption is defended chiefly on the grounds of simplicity and that there is inadequate knowledge to suggest what type of function should be used if simple proportions are rejected.[20]

The assumption that there is no substitution among inputs or that the marginal productivity of any of them defined as the ratio resulting from dividing an infinitesimal increment of total output equals zero

[17] L. R. Klein, "On the Interpretation of Professor Leontief's System," *The Review of Economic Studies*, XX (2), No. 52 (1952-1953), 131-36; and *A Textbook of Econometrics* (Evanston, Illinois: Row Peterson and Company, 1953), pp. 202-10.

[18] Carl F. Christ, "A Review of Input-Output Analysis," National Bureau of Economic Research, *Input-Output Analysis: An Appraisal* (Princeton: Princeton University Press, 1955), p. 141.

[19] Duane Evans and Marvin Hoffenberg, "The Interindustry Relations Study for 1947," *The Review of Economics and Statistics*, XXXIV (May, 1952), 100.

[20] Christ, *op. cit.*, p. 140.

may be explained on one of two grounds: (1) the technology is such that no substitution is possible; or (2) relative prices do not change, so that it is not efficient to alter input proportions. It should be emphasized, however, that "the assumption of fixed coefficients of production necessarily entails the existence of some disparity between our theoretical scheme and the actual industrial set up it is intended to represent."[21]

Defining the input-output coefficient as: $a_{ij} = x_{ij}/X_j$, the input-output system becomes:

$$X_1 = a_{11}X_1 + a_{12}X_2 + \ldots + a_{1n}X_n + Y_1$$
$$X_2 = a_{21}X_1 + a_{22}X_2 + \ldots + a_{2n}X_n + Y_2$$
$$\cdot \quad \cdot \quad \cdot \quad \cdot \quad \cdot \quad \cdot \quad \cdot \quad \cdot$$
$$X_n = a_{n1}X_1 + a_{n2}X_2 + \ldots + a_{nn}X_n + Y_n$$

or in matrix notation:

$$X = AX + Y$$

where:

X = vector of total outputs;
A = matrix of input-output coefficients;
Y = vector of final demands.

The input-output accounting system just described can be used by representatives of economic and social institutions to work out a coherent projection of the future economic situation which can be made available to all parties. Events can invalidate the basic assumptions adopted for the projection, particularly those concerning external trade and the behavior of economic units. The consistency of the forecast and the wide participation in its preparation reduces, however, the uncertainty involved in the business environment and permits a steady growth of the economy without, or with, minimum imbalances.

CONCLUSION

The expanding role of accounting in serving the public interest as well as the development of social accounting was anticipated and discussed by Professor Littleton several decades ago.[22] Both the old pro-

[21] Leontief, *The Structure of American Economy, 1919-1939,* p. 40.
[22] More recent contributions are: A. C. Littleton, "Accounting Rediscovered," *The Accounting Review,* XXXIII (April, 1958), 246-53; and A. C. Littleton and V. K. Zimmerman, *Accounting Theory: Continuity and Change* (Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1962), pp. 200-22.

posal of business self-government and its recent counterpart, consistent forecasting, have generated powerful forces which will require accountants to define their terms more precisely and to unify their procedures so that the financial reports of business enterprises can be used for social accounting purposes as well as for coordinating future enterprise decisions. This development is a result of the changing economic environment in which accounting has operated, and the history of accounting reveals that accountants have attempted to cope with such developments, even if belatedly in some instances.

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